DOCUMENT RESUME

ED 023 840 VT 005 996

Vocational and Technical Education.
Education Commission of the States, Denver, Colo.
Pub Date Jun 68
Note-48p.
Journal Cit-Compact; v2 n3 pp1-44 June 1968
EDRS Price MF-$0.25 HC-$2.50
Descriptors-Business, Economically Disadvantaged, Educational Innovation, Educational Objectives, *Educational Problems, Expenditures, Federal Aid, Federal Laws, Federal Legislation, Industry, Junior Colleges, Manpower Needs, Program Improvement, *Program Proposals, State Programs, *Technical Education, Urban Education, *Vocational Education

Volume 2, Issue 3 of "Compact" was designed to point out the problems and potential of vocational-technical education and to offer some suggestions for action. Major content includes: (1) "Education for Twenty-First Century Employment," by Wayne Morse, (2) "Pending Federal Legislation Encourages Vocational Innovation," by Grant Venn, (3) "Vocational Education in Federal Legislation: A Summary," (4) "Crisis in Vocational Leadership, by Lowell Burkett, (5) "The Governors Support Vocational Legislation," by Calvin Rampton, (6) "Proposals for State Action in Occupational Education," (7) "Voluntary Quality Control for Vocational-Technical Schools," by Frank Dickey, (8) "Occupational Education, Middle Manpower and the Junior College," by Norman C. Harris, (9) "Rhode Island Pioneers Coordinated Approach," (10) "The Manpower Mission of the Public Schools," by Marvin Feldman, (11) "Is Vocational Education for the Poor?" by Philip Lerman, (12) "Pennsylvania's Scheme Offers New Hope for Slum Dwellers," (13) "The Urban Education Context," by John Volpe, (14) "Changing Industrial Needs and Job Training," by Charles DeCarlo, (15) "What Is the Responsibility of Business in Modernizing Education?" and (16) "The Private Sector in Vocational Education," by Charles Percy. Tables reflect federal allotments to states for vocational education in fiscal year 1968 and total state expenditures for vocational education in fiscal year 1965. (DM)

C1

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

IMPACT

ED023840

VTC05996

VOCATIONAL AND TECHNICAL EDUCATION

JUNE 1968
Vol. 2 No. 3

Cover: *Sculpture by Mrs. Susan Pogzeba, Denver artist. The winner of the recent William and Marion Zeckendorf Foundation sculpture award, Mrs. Pogzeba designed the four-and-one-half ton bronze now placed in Denver's Zeckendorf Park.*
Photograph by Winter Prather.

COMPACT is published bi-monthly by the Education Commission of the States. The editorial policy is to present a balanced viewpoint on the important educational issues of our times. All signed articles reflect the opinions of the authors and do not necessarily represent the position of the Commission. Letters, inquiries, and manuscripts are welcome and should be addressed to the Editor, The Education Commission of the States
822 Lincoln Tower Building, 1860 Lincoln Street, Denver, Colorado 80203.

Editor: Sally V. Allen **Associate Editor: Karen Sweeney**

ECS

COMPACT

Copyright © The Education Commission of the States 1968. All rights reserved.

"PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL HAS BEEN GRANTED BY The Education Commission of the States TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE U.S. OFFICE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER."

Contents

The Problem and the Need 2

Wayne L. Morse—Education for Twenty-First Century Employment 3

Grant Venn—Pending Federal Legislation Encourages Innovation 6

Calvin L. Rampton—Governors Support Vocational Legislation 14

Frank G. Dickey—Voluntary Quality Control 20

Norman C. Harris—Occupational Education, Middle Manpower and the Junior College 23

Marvin Feldman—The Manpower Mission of the Public Schools 27

Philip E. Lerman—Is Vocational Education for the Poor? 29

John A. Volpe—The Urban Education Context 33

Charles R. DeCarlo—Changing Industrial Needs and Job Training 38

Charles H. Percy—The Private Sector in Vocational Education 42

In Brief—Crisis in Vocational Leadership: Lowell Burkett 12
- Proposals for State Action: Minear Report 16
- Rhode Island Pioneers Coordinated Approach 26
- Pennsylvania Offers Hope for Slum Dwellers 32
- Art of Fishing in Alaska 35
- Responsibility of Business: U. S. Chamber of Commerce 41

Tables—Vocational Education in Federal Legislation: Summary 9
- Federal Allotments to States, FY 1968 13
- Projected Educational Attainment of Labor Force, 1975 15
- Median Years of School Completed by Workers, 1966 17
- Occupational Shifts, 1965-75 25
- Differentials in Unemployment Rates, 1966 28
- Job Vacancies in Philadelphia Metro Area 32
- Employment by Major Occupation Group, 1964-75 44
- Total Expenditures for Voc-Tech Education by State 45

Departments—From the Mailbag 2
- ECS Commissioners Speak Out on:
  - Federal, State and Private Industry Responsibility 18
  - Coordination of Voc-Tech Education at State Level 22
  - State Priorities for Voc-Tech Education 36

The Problem And The Need

NO area of education has been more neglected—or even maligned—than has vocational-technical training. Yet no other area offers more hope for the solution of some of the nation's social and economic problems. With appropriate training, millions of Americans who would otherwise be unemployed or underemployed could participate meaningfully in the economy and could fulfill ever-growing national needs for middle-level manpower.

There is now general agreement that occupational education has not reached its potential. But there is little agreement about how the complex problems underlying its improvement can be solved. Fundamental to their solution is the need to change basic prevailing attitudes about what is "success" and to raise the prestige of all forms of occupational education.

Those who bridle at the high cost of this type of education must be convinced of the actual returns through increased income taxes and improved employee competence, of the need for more technical manpower if industry and business are to meet demands for goods and services, and of the increasing cost of supporting the unemployed. Those who place higher priority on traditional liberal arts education and those who argue that occupational training should be geared only to students who "can't make it" in other courses must be made to understand the inherent value of comprehensive vocational education and its critical role in the national economy.

Actions such as the following should be taken by each state:

1. High priority should be accorded to the funding of vocational-technical education programs of high quality. States should consider granting aid to voc-tech schools on the basis of a formula which recognizes the quality of program offered, its availability to those who most need it, and the extent to which it is coordinated with other educational offerings at all levels throughout the state.
2. State political and educational leaders should make known to Congress their strong support for the pending Learning and Earning Act of 1968 and the Vocational Education Amendments of 1968 (Pucinski Bill). These bills, which would provide for comprehensive planning and establishment of priorities at the state level, consolidation of federal aids, advance funding, and a more adequate federal share of costs as well as new activities and incentives, particularly for the disadvantaged, would be important legislative steps toward more effective voc-tech programs.
3. State political and educational leaders at all levels must seek ways of developing better leadership in the voc-tech field, including the training, hiring, and retention of competent staff members, teachers, and administrators.
4. Educators, particularly superintendents of schools and higher education leaders, must more effectively interpret the needs for voc-tech education and raise its esteem in the academic community. Guidance counselors in public schools should be better prepared to offer information about voc-tech programs and current employment opportunities. Voc-tech programs themselves must be more closely related to current and future job markets.
5. States should offer incentives to private industry to develop and expand their own occupational training efforts and to insure close cooperation with school authorities.
6. New administrative devices should be developed at the state level to insure close cooperation among existing state boards of education, boards of higher education, the administrators of junior colleges, and vocational-technical education boards.

This issue of *COMPACT* has been designed to call to the attention of state political and educational leaders the problems and potential of vocational-technical education and to offer some suggestions for action. Future issues of this magazine and other Education Commission publications will report effective practices and innovative efforts in the field of occupational education.

—W.H.P.

from the mailbag

Finance Issue

Your excellent issue for February, 1968, Financing Public Education, has excited considerable interest in Tennessee. —Frank H. Yates; Director of Research, Tennessee Department of Education

As Research Director of the Birmingham Area Chamber of Commerce and as one who is deeply involved in education matters in this metropolitan area and throughout the state of Alabama, I would like to compliment you on the editorial content of the February 1968 issue. R. S. Crowder; Birmingham Area Chamber of Commerce, Alabama

We have a just-appointed citizens committee in Kansas City to study goals for the schools and ways to finance them. The February, 1968 *COMPACT* is particularly filled with material which would be helpful to such a committee.

—John C. Drake; Executive Secretary, Kansas City Education Association

Urban Education Issue

Allow me to congratulate you on the most recent issue of *COMPACT* (April, 1968). It is an excellent issue and one which will remain a resource piece for all people interested in education.

—Miriam K. Ringo; Director, Illinois State Department of Personnel

I am most impressed by the informative and relevant articles in the issue on Urban Education. This is a subject of great concern to me and a number of colleagues, and one that I believe the Congress must act on with urgency, dispatch and imagination. —Ogden R. Reid; Member of Congress from New York

The Seattle School District has a special interest in this issue which carries an article by our Superintendent and points of view of particular concern in *ECS Commissioners Speak Out.* —Philip B. Swain; Director of Management Development, Boeing Company, Seattle

Schedule Revised

Thank you very much for the April issue of *COMPACT* and particularly for the plug given our suit ["Detroit Tests State Aid" page 8.] We have been met with some procedural delays and as a consequence have had to revise our estimate of the trial court's decision from late spring until early summer. I hope that further revision will not be necessary.—George E. Bushnell, Jr.; Lawyer, Detroit, Michigan

WAYNE L. MORSE

Education For Twenty-First Century Employment

Senator Morse was first elected to the U. S. Congress from Oregon in 1944, after teaching at the University of Oregon Law School and serving as President Roosevelt's Chairman of the National Railroad Emergency Board. He is currently chairman of the Education Subcommittee of the Senate Labor and Public Welfare Committee.

The responsibility for preparing young Americans for life in the twenty-first century belongs to our schools. Children now being educated will be earning their living after the year 2000 A.D. The rapid changes in American society and economy during the last two decades and those which are predictable during the next decade indicate that the life of these young people will be filled with opportunities, crises, and problems which are beyond present imagination.

It is impossible to train children for twenty-first century life. It is only possible to provide them with an education which will permit them to take advantage of new opportunities, withstand unforeseen crises and solve heretofore unsolvable problems. Modern technology, the rapidly expanding world of knowledge, and freedom from poverty could lay a foundation for a civilization which, for the first time in human history, would offer every American an opportunity to develop his full potential.

It is also possible that technological progress and the economic advantages accruing to those who have mastered that technology will leave a large segment of our society behind—separated from the benefits of the mainstream of the society and the economy.

Challenge for Vocational-Technical Schools Recognized Through Law

The role of vocational and technical education in the growth of the economy and in the lives of the American people is an open question at this time. If our educators continually adapt the programs offered in vocational and technical education in order to prepare students for lifetime careers, it could and should play a vital role. However, innovations and discoveries in technology, the rapid accumulation of knowledge and the kaleidoscopic changes in the economy are challenging our schools. If that challenge is not met, vocational and technical education will no longer serve its basic purpose; it will no longer have a valid reason for being; and millions of Americans will suffer the loss of what could be the key element in a well-rounded, balanced economy.

The importance of vocational and technical education to the economy has been recognized by Congress since the enactment of the first Land-Grant College Act in 1862. The land-grant colleges were established to meet the need for professional competence in the nineteenth century agricultural economy and the need for engineers in the industrializing areas of the country.

During the first world war the Smith-Hughes Vocational Education Act of 1917 was passed by Congress in order to provide training at the secondary school level. This was in recognition of the fact that secondary education was the level which would have the greatest impact on the lives of the people and on the nation's economy. Congressional concern with vocational education at the secondary school level resulted in continued expansion of federal programs until after World War II, when the George-Barden Vocational Education Act became law.

The impact of World War II on the industrialization of the country was so great that industry and technology overshadowed agriculture. The nation's manpower needs were dramatically altered. In 1958, with the enactment of the National Defense Education Act, the area vocational program was initiated in order to provide training for vitally needed technicians.

In 1963, Congress gave a thorough review to the basic elements and philosophy of vocational education for the first time since 1917. Recognizing the need for flexibility in a rapidly changing society, an entirely new law was enacted. The Vocational Education Act of 1963 was specifically designed to provide a vehicle for meeting new manpower needs as they arise and for making programs available to young people which are tailored to meet their individual needs.

There are three facets of that Act which are of prime importance: (1) a recognition of post-secondary and adult education as the areas of future growth; (2) special programs to meet the special needs of persons who, by reason of disadvantage or handicap, have difficulty in succeeding in regular programs; and (3) provision for a complete professional evaluation after five years of operation.

The evaluation was completed in January of 1968, and the Congress is reviewing the program in depth. This review cannot be conducted out of the context of the total picture of American education.

These basic facts must now be recognized and dealt with in considering vocational education: (1) the level of American education of greatest overall importance has shifted from the secondary level to the post-secondary level; (2) thousands of disadvantaged young people drop out of school before high school graduation; and (3) the manpower needs of the economy are becoming so highly technical, varied and shifting that it is highly improbable that a single-purpose terminal secondary school training program can adequately prepare students for a lifetime career.

The capacity of traditional vocational programs to cope with these facts of life is doubted by many educators. Some have suggested that vocational education no longer has a reason for being. I disagree with those who see no future in vocational and technical education. I believe that the nation's educators can bring about the changes in vocational and technical education which will make those programs fill what seems to be a void in the future of our education system.

Special Needs of Individual Students

There are two groups of students which, unless given special attention, will never fulfill their maximum potential: (1) the physically and mentally handicapped, and (2) children who are disadvantaged by socio-economic circumstances.

The 1963 Act recognized the important role vocational or occupational education should play in the education of children with special needs. In the specified uses of federal funds in the Act, a special category was provided for special needs.

However, of more than $800 million spent for vocational education under the Act, only $5 million—or less than one per cent of the federal funds appropriated—was spent for special needs programs. Those figures indicate that more attention will have to be given to this area.

Vocational education, if properly adapted, could serve as a valuable means to prevent high school dropouts. Some reports have indicated that vocational education has a poorer retention rate than general education. It is generally suggested the reason is that many vocational programs are unrealistic in the modern world—that the vocational programs are training for jobs in which there is no future.

Changing manpower needs have made many training programs obsolete. The answer to this problem may not be to put in new training programs but to change the focus of these programs from training to education—occupational education.

Occupational education programs designed to familiarize students with the world of work ahead of them and with the various occupations which will be available for them would seem to be more realistic than job training. Such programs should be very effective in holding those children who need special programs in school. Occupational familiarization programs would show them the necessity of staying in school and hold their interest while they are there.

Occupational education—as opposed to vocational training—should be instituted at the junior high school level. The Act of 1963 provides the flexibility for non-job training programs at the 8th, 9th and 10th grades which bring the employment world outside the school into the classroom. Such programs could provide a means for making school more relevant to the lives of disadvantaged youth, inspire them with the ambition to continue in school and instill in them greater aspirations than they receive from their environment.

Vocational programs for handicapped students and disadvantaged youth can, if properly planned and administered, be a valuable tool in bridging the great chasm which often separates them from full participation in our society.

Post-secondary Education Should Assume New Role

Post-secondary education has replaced secondary education as the terminal program for a majority of American young people. High school vocational programs should reflect this change. All too few have done so. The new technology has made many of the occupations for which high school training is adequate almost obsolete. The vast majority of American young people want to continue their education beyond high school. Why should they be enrolled in terminal training programs in high school?

Vocational programs can be of more use to these students if they are designed to prepare students for post-secondary technical programs. Basic principles of applied science would be of more use than lathe operation to a student who would like to continue his education.

Failure to recognize the shift from secondary to post-secondary education on the part of vocational educators has led to failure on the part of the general public to recognize the importance of technical education at the post-secondary level. As a result the parent and the child are so intent upon a college education that the possibility that the child might prefer to be a laboratory or electronics technician is completely overlooked.

Parents, realizing the importance of education in the future, are making every effort to make sure their children go to college. Young people, for whom a college education appears only a distant improbability, are in despair when they think of their future. The importance which has been placed upon a college degree in the marketplace is a disservice both to colleges and universities and to the young people who feel compelled to obtain a degree.

All too often the employer unrealistically demands the college degree for its presumed social status value regardless of the actual job requirements. More adequate recognition should be given to a degree other than the bachelor's, such as those issued by the post-secondary two-year institution. There is or should be room for a four-year degree similar to those granted by polytechnic institutes that have been so successful in many European countries.

Traditionally colleges and universities have been designed to provide students with an opportunity to get a liberal education—not to train them for a job. The curriculum was one designed to terminate with a doctorate in philosophy. In recent decades, universities have moved in the direction of training students for jobs by offering post-graduate professional education in such fields as medicine, education, engineering and law. To that extent they have in effect become vocational schools. If universal post-secondary education becomes a reality in this country, as I hope it does, post-secondary education will be, to an even greater extent, vocationally-oriented. This is as it should be.

In my opinion it would be a severe mistake to make our future entirely dependent upon adapting the college curriculum. The concepts which form the basis for vocational, technical and engineering curricula can be more readily adapted. An expansion of the applied sciences curricula offers a realistic avenue by which young people may prepare themselves for productive and satisfying careers throughout their lives.

It goes without saying that post-secondary vocational and technical institutions are in a position to play a major role in the future of our society. These institutions are in a unique position—a position in which they can train young people to enter the labor market and at the same time offer an education to prepare them to meet crises in their lives arising from the rapidly changing technology and expanding economy.

A view of the occupations in which there is a current shortage of manpower will indicate the direction occupational education must take: physicians, nurses, health service personnel, teachers, social workers, engineers, draftsmen and mathematicians.

Projections of employment growth over the next ten years indicate that the fastest growing occupational groups are professional and technical workers, service workers, clerical workers, and managerial and proprietary workers. I foresee a time in the not-too-far-distant future when our technology will have advanced to the point that all of the present "skilled labor" occupations will be obsolete. Persons who are now in, or are training for, those occupations will have to be retrained unless they have an education which will permit them to change with the needs of the economy.

The recent period of revolutionary discoveries and innovations in science and technology has resulted in such an accumulation of knowledge that even scientists and engineers are threatened with inability to keep up with their fields. If this problem is facing scientists and engineers, persons in the occupations ancillary to those fields are faced with an almost insurmountable task in keeping up. This means that post-secondary vocational and technical schools are going to have to adapt to continuing education programs in the technical fields. It means that education is going to become a facet of everybody's career which continues throughout an entire lifetime.

There are limits to what can be done in the form of legislation to guide vocational education in the future. Congress can make funds available and provide general guidelines for the use of those funds. The primary responsibility for vocational and technical education rests with the people involved at the local level. They must be ever alert to insure response to the ever-changing needs of the people for education and the needs of the economy for manpower.

GRANT VENN

Pending Federal Legislation Encourages Vocational Innovation

Dr. Venn is Associate Commissioner of Education for Adult, Vocational, and Library Programs. Formerly president of Western State College, Gunnison, Colorado, he has served as the Peace Corps' Director of Overseas Training in Puerto Rico, Superintendent of Schools in Parkersburg, West Virginia, and research associate with the American Council on Education. He is the author of Man, Education and Work (1964), *a report on post-secondary vocational and technical Education.*

> Why is vocational education necessary? It is the bridge between man and his work. Millions of people need this education in order to earn a living. Providing for an individual's employability as he leaves school and throughout his worklife is one of the major goals of vocational education. Vocational education looks at a man as a part of society and as an individual, and never before has attention to the individual as a person been so imperative.

That question and its answer is taken from the cover of one of three publications issued by the Advisory Council on Vocational Education which spent 1967 making an exhaustive study of the progress of vocational and technical education in this country. The Council's aim was to assess progress under the landmark Vocational Education Act of 1963 and to make recommendations for improvements in both the administration and the legislation controlling the federal efforts in these fields.

The Congress is considering legislation which would implement most of the Council's recommendations and others which have been made by the broad constituency of vocational education. Even before the council's publications were available, however, the Administration had recommended legislation which would have provided a stronger base of support and greater attention to new and exemplary programs in the field.

Partnership for Learning and Earning Act

The Partnership for Learning and Earning Act is being considered at this writing by both the House and the Senate. The Administration budget calls for an expenditure of $15 million in fiscal year 1969 for experimental programs to help overcome basic problems of vocational and technical education. If approved, the overall budget for vocational programs at the federal level would exceed $300 million next year.

What do we expect to get for our extra money?

The legislation is based on the philosophy that the school has a significant role and responsibility in manpower development. Mere recognition that schools can improve their performance in equipping the disadvantaged with salable skills is not enough. The whole educational system for all students—the curriculum, the instructional programs, their relationships to each other—must take into account present and future occupational opportunities.

To say the schools have failed in this responsibility is grossly misleading. They have not; they have made a significant contribution. The public schools are not solely responsible for assuring social justice, but they can serve as a viable vehicle for assuring appropriate opportunities for all to prepare for satisfactory employment.

The proposed legislation has, essentially, four aspects.

Exploratory Junior High Occupational Education:

The first is an exploratory occupational education program helped by federal funds for all junior high school students. It is during the 7th, 8th, and 9th grades that the majority of our young dropouts leave school. Or if a state law prevents it, they decide then that they have had enough report cards telling them they aren't going to make it. They leave as soon as the law permits. Exploratory programs would provide the junior high school age group with a broader understanding about the different kinds of work and the many different ways one may approach preparation for work.

It may be that we should start even earlier than 7th, 8th and 9th grades to give young people a broader understanding of different occupations without forcing them to make a vocational choice. The idea is simply to give them a broad base from which they can make intelligent choices when the time comes.

Part-Time Work Experience:

The second part of the proposed amendment calls for part-time work experience for all youngsters in high school who wish to take advantage of the opportunity. It would assist needy students to continue their education. It would promote a sense of achievement in school-related work experiences, enlarge educational opportunities, help youngsters recognize the value of work, and establish better communications between educators and other important segments of the community, particularly the working community.

These experiences should primarily teach young people employability and job skills. Students might then see for themselves that regular attendance in school and at work pays off. They might see that good citizenship practices and good attitudes toward work and school are amply rewarded. Job experiences enable the student to test his employability skills and job skills and to evaluate his growth.

Entry Job Placement:

The third aspect of the proposed amendment places the responsibility for entry job placement on the schools. Our schools now assume full responsibility for the college-bound student—to get that young student to college and into a program that fits him. But, if more than 80 per cent of our young people between high school and the baccalaureate degree must enter the work force directly, it seems to me that our schools must assume this new kind of responsibility. In providing this new service, schools would cooperate with the local state employment service and with business and industry in the community.

School would become the best place for every young person to be helped in getting that first job. There are many private skill schools functioning effectively and charging rather substantial tuition rates. They give young people occupational training and promise them jobs. The public schools have never been encouraged to assume this responsibility.

New Curricula:

The fourth part of the proposed legislation is designed to develop new curricula in vocational education to serve youngsters now being ignored. For example, a student who intended all through high school to go on to college suddenly decides, for some reason, not to. We must set up short courses of one semester or six weeks to give these young people specific salable skills to make them immediately employable.

The Congress is still considering this legislation. It may or may not become law.

Impact of Proposals on Industrial Arts

So far as the impact of such proposed changes on industrial arts education goes, one can almost read "industrial arts" wherever the phrase "vocational education" appears. The distinction between industrial arts and vocational education—at best confusing to the layman—is doubly confusing when one considers the practices in different school systems.

In theory, in most states, industrial arts is not, of course, intended to provide students with a marketable skill. It is said to be a part of general education, not occupational education. It involves study of materials, organization, tools, processes, and appreciation of industry. The program is aimed to provide a basis for making a vocational choice, but in most instances it is highly unlikely that industrial arts courses do provide a basis for choice among a number of alternative occupations or for the development of real knowledge or appreciation of the organization or problems of industry.

The Need for New Vocational Objectives

In practice, industrial arts programs run the whole gamut from providing "snap" courses for dabbling in a number of things to providing courses with a definite vocational intent. In the latter case the programs are operated without correlation with vocational education; therefore, the quality falls short of that needed to do a complete job of occupational preparation. The programs are frequently handicapped by lack of a continuing plan from elementary through high school, necessary commitment, time, and vocationally competent teachers needed to develop marketable skills.

Both industrial arts and vocational education suffer from the same malady, namely, lack of the formulation of clear cut, specific objectives understood and subscribed to by the instructors, academic faculty, school administrators, parents, and the general public.

A wide variety of orientation and exploratory occupational education programs could replace more limited industrial arts and home economics subjects commonly offered in the junior high school. Some modification of the current industrial arts program is needed to achieve continuity with occupational education. Vocational education and industrial arts may collaborate in producing pre-vocational programs to prepare for future-oriented vocational careers. These should be widely available so that all students might be prepared for the world of work without asking for premature commitment or limitation to a particular occupation.

As students progress through broad-content courses in junior high school and the early years of senior high school, subject matter may be focused and intensified. For some students, the courses may prepare for immediate employment in entry-type jobs; for others, the occupational courses would prepare for advanced training in post-secondary institutions.

The proportion of the labor force in production jobs has decreased to about 40 per cent. Attention must be paid to emerging fields for which there are few pre-vocational programs in secondary schools leading to post-secondary specialization. Among the neglected areas are hotel-motel-restaurant management, communications, industrial technologies, architecture, city and county planning, police and fire sciences, health technologies, and human services.

A fundamental change that has taken place in our culture is the acceleration of the rate of accumulation of knowledge. In addition, the view is generally accepted that there is no place in the modern world for the uneducated and the untrained and that there is only a slight difference between the uneducated and the undereducated, or the untrained and the undertrained. But in too many instances our schools are based on a concept that is increasingly inadequate, namely that an individual can be prepared in four years, or eight years, for a continuous lifetime career.

Efforts should be directed toward providing a base for the development of an occupationally-oriented program for all students in grades 10 to 12 and a skill development program for some in high school which will lead to further post-secondary on-the-job or in-school preparation for careers. In this way every student can be encouraged to make a tentative choice of an occupational objective and be given an opportunity and a means for achieving it. The educational program once started must be continuous, with expert counseling and guidance provided at the time each student makes a change in his goal, and flexible to permit crossovers from one curriculum to another without penalty.

An educated person must have occupational skills as well as intellectual knowledge. The objectives and programs of all high schools should provide opportunities for the development of vocational competence as well as preparation for post-high school education. More basic than the academic and vocational characteristics of the educational program is the development in each student of the ability and motivation for self-learning and continuing education.

Today we know that graduation is only the beginning of learning for nearly everyone. It is imperative that we make available to all on a continuing basis educational experiences that will make it possible to cope with the changing technology and the changing jobs in our economy.

If our educational system is to continue to be the chief source for preparing youth for the world of work, it must assume the responsibility for helping youth make the transition from school to work. Our schools and colleges must make orientation to the world of work and exploration in broad occupational fields integral parts of the total educational program of each individual as well as specific training for some.

The strength of our society depends upon the full development of every individual. Thus we must gear our educational system to the concept of continuing education in its broadest sense.

The Need for Funds, Staff and Innovation

Among the major deterents to innovation and the organization of exemplary programs of occupational orientation and exploration in junior high schools are lack of money, lack of an adequately trained teacher corps, and allegiance to a single curriculum or program for everyone.

The allegiance to "one answer" may be overcome through demonstrated success within the framework of present institutional facilities. The results obtained in the demonstration programs will provide the specifications and characteristics for new facilities as well as modifications of existing educational practices which may be necessary.

Some elements of the occupational orientation and exploratory program are already being demonstrated successfully in several centers. Among these are Quincy, Massachusetts, where the emphasis is on a continuous guidance and counseling program in grades 7, 8, and 9. In Norwalk, Connecticut, a special school for dropouts and potential dropouts makes use of several "laboratories," each staffed by a "shop" instructor and a counselor. The laboratories include libraries with programmed materials, to which a student goes when a need for additional academic learning is generated by shop or on-job experience. Parkersburg, West Virginia, makes use of a counseling and guidance program that involves parents and job placement.

Nothing discussed in this article in connection with exploratory vocational programs is radical, and little is untried. It merely awaits general acceptance and, as with many needed innovations, some additional funds. The federal money involved in all these programs, although significant, is really little more than seed money. The larger burden remains on the states and local school districts—where it belongs.

The role of the federal government is primarily one of assistance to leadership in all of education, including specifically vocational and industrial arts education. Authority to promote the "exemplary programs" cited in this article would, in my opinion, strongly bolster the ability of the U. S. Office of Education to provide this leadership.

Vocational Education In Federal Legislation: A Summary

Objectives Recommended in Vocational Education Act of 1963

The Vocational Education Act of 1963 incorporated an evaluation system, which included periodic appointment of an Advisory Council on Vocational Education to appraise results under the Act and recommend improvements, both in administration and legislation.

The first Advisory Council, chaired by Martin W. Essex, State Superintendent of Schools in Ohio, submitted its report entitled *The Bridge between Man and his Work* to the Secretary of Health, Education, and Welfare in December, 1967. The report listed a number of characteristics of an adequate system of vocational education capable of achieving the objectives of the 1963 Act, including the following:

1. Occupational preparation should begin in elementary school with a realistic picture of the world of work, to familiarize the student and provide him with necessary intellectual tools and habits of thought to play his role in it.
2. The junior high school program should involve study of the economic and industrial system with the objective of exposure to the full range of occupational choices.
3. Occupational preparation should become more specific in the high school, though not limited to specific occupations, with instruction built around significant families of occupations or industries. All students outside the college preparatory curriculum should acquire an entry-level job skill plus preparation for post-high school vocational and technical education. College-bound students may benefit from this training also.
4. Occupational education should be based on a spiral curriculum which treats concepts at higher and higher levels of complexity. Vocational preparation should make general education concrete and understandable; general education should point up the vocational implications of all education.
5. Some formal post-secondary occupational preparation for all should be a goal for the near future. Because the labor force entrant without advanced skills gained through post-secondary education, apprenticeship, or on-the-job training will soon be at a serious disadvantage, 14 years of free public education, with a terminal occupational emphasis, should be a current goal.
6. To bolster an upward occupational climb, part-time and full-time courses and programs should be available to adults as part of the regular public school system.
7. Any occupation which contributes to the good of society is a fit subject for vocational education. Although first attention must be paid to occupations which offer expanding opportunities for employment, adult instruction is justified even in very restricted fields.
8. Occupational preparation should not be limited to the classroom, school shop, or laboratory. Many arguments favor training on the job.
9. The school must work with employers to build a bridge between school and work, placing the student in a job and following up his successes and failures.
10. No matter how good the initial preparation and the opportunities for upgrading on the job, there must be remedial programs, which will differ from preventive programs in that many students will require financial assistance and courses must be closely oriented to the labor market.
11. At every level there will be those with special needs as defined by the 1963 Act who, for both humanitarian and economic reasons, will deserve special help.
12. Residential facilities will be needed to provide an adequate system of occupational preparation wherever their absence presents an obstacle to anyone in need of education and training. Many communities are too small to muster sufficient students for occupational offerings broad enough to provide freedom of choice.
13. The public system for occupational preparation must be supported by adequate facilities and equipment, by research and innovation, by the preparation and upgrading of competent teachers, counselors, and administrators, and by constant evaluation and reporting of problems and accomplishments.
14. Training opportunities must not be based on the number of jobs which are available but on the number of persons needing training. But data must be made available on public and private training opportunities, and data on supply and demand for various occupations must be available on a broader and more accurate basis.

The following chart is designed to relate the specific recommendations of the Advisory Council on Vocational Education (Essex Report) and the provisions included in two legislative measures pending before the Congress. These are the Partnership for Learning and Earning Act, *submitted to Congress by President Johnson, and the* Vocational Education Amendments of 1968, *which was introduced by Representative Roman Pucinski, Chairman of the House General Subcommittee on Education, with a number of co-sponsors.*

Vocational Education In Federal

REPORT OF THE ADVISORY COUNCIL ON VOCATIONAL EDUCATION, 1967 (Essex Report)	Consolidation of all voc. ed. legislation	Permit matching of federal allotments on statewide rather than area-by-area or project-by-project basis	Provision for states to receive allotments earlier in the calendar year & spend funds through the succeeding fiscal year	Funds to states on basis of incentives for improvement and increased enrollment & attendance
PARTNERSHIP FOR LEARNING AND EARNING ACT OF 1968	Consolidation of all voc. ed. legislation by 1970	Eliminate requirements for separate state matching purpose-by-purpose and project-by-project with overall statewide matching substituted	Extend advance funding from ESEA amendments of 1967 to voc. ed. programs	
VOCATIONAL AMENDMENTS OF 1968 (Pucinski Bill)[2]		Eliminate matching by separate categories; provide for statewide matching of federal funds	Authorize advance funding for voc. ed. programs	
REPORT OF THE ADVISORY COUNCIL ON VOCATIONAL EDUCATION, 1967 (Essex Report)	Authorization & funding for homemaking education	25 percent of voc. ed. funds for post-secondary & adult programs	Extend opportunity grant program of 1965 Higher Ed. Act to post-secondary voc-tech programs by setting aside 25 percent of the funds appropriated for student assistance	
PARTNERSHIP FOR LEARNING AND EARNING ACT OF 1968	$15 million for home ec. — 1970			Lower min. eligible age for 1966 Adult Ed. Act from 18 to 16
VOCATIONAL AMENDMENTS OF 1968 (Pucinski Bill)[2]	Home ec. training $50 million in 1969 & in 1970			
REPORT OF THE ADVISORY COUNCIL ON VOCATIONAL EDUCATION, 1967 (Essex Report)	Financial support for preparation & upgrading of professional & para-professional personnel	Curriculum centers should be established		Creation of Cabinet-level Department of Education & Manpower Development
PARTNERSHIP FOR LEARNING AND EARNING ACT OF 1968	Percentage of funds for teacher training & special projects under Adult Ed. Act from 10-20 percent to 20-40 percent			
VOCATIONAL AMENDMENTS OF 1968 (Pucinski Bill)[2]	Teacher training fellowships, exchange programs, & institutes; fellowships—$25 million in 1969 & in 1970 Other teacher programs— $20 million—1969 $30 million—1970	Develop. of voc. ed. curricula combining voc. & academic courses $7 million — 1969 $10 million — 1970	Information services to encourage youths & adults to enter careers in voc. ed. $3.5 million — 1969 $4 million — 1970	Creation of separate Bureau of Voc. Ed. in Off. of Ed.

---

[1] Appropriations listed are for fiscal years.

[2] Funding recommendations are given here only through fiscal 1970. The Bill contains provisions for additional years.

egislation: A Summary[1]

& authority for perma- programs for persons academic, social, eco- or other handicaps	Permanent authority for secondary & post-secondary work-study programs	Residential voc. schools built with grants to or through state boards	Learning Corps should be established for economically disadvantaged youths	Include job placement in education responsibility for vocational students
s earmarked for pro- m s for disadvantaged nning 1970 — 25% of s above 1969 level				Provide general authority to improve job placement of students
special funds for disad- taged, large cities & rural s especially; drop-outs & mployed youth 0 million — 1969 0 million — 1970 25 percent of new funds existing programs ear- ked for disadvantaged	1) re-authorization of work-study provision of 1963 Act. $30 million in 1969 & in 1970 2) New work-study program, primarily for disadvantaged, 90-10 matching $50 million—1969 $100 million—1970	Re-auth. & provision for at least one residential voc. school in each state, $10 million — 1969, $300 million — 1970, 90-10 matching channeled through state boards	2 percent of funds for special programs for disadvantaged reserved for Learning Corps	
ovation encouraged by tracts between Comm. of , & state boards, local ncies, & other public or -profit institutions	Make 10 percent of funds set aside for research available for research. Allocated by Comm. of Ed.	Projected program activities should become 5-year plan subject to annual updating	States conduct periodic review & evaluation of their programs	U.S.O.E. submit annual Voc. Ed. report to Congress & President-Nat'l Advisory Council should have fulltime staff
5 million — 1969 — to te Boards of Voc. Ed., al ed. agencies, public & ivate agencies, for exem- ary programs	Retain present 10 percent research provision, authorize private contracts and funds for dissemination of information	Each state prepare 5-yr. voc. ed. plan & 1-yr. operational plan, each updated annually	Each state create a State Advisory Council on Voc. Ed., report to state, state board & Nat'l Advisory Council annually on state plan	Establish permanent Nat'l Advisory Council of Voc. Ed. to report annually to Pres. & Congress; advise Comm. of Ed. on regulations & policy matters
emplary programs 0 million — 1969 00 million — 1970	Earmark for research up to 10 percent of funds approp. for grants or contracts under 1963 Voc. Ed. Act	States submit annual & 5-year plans showing projected development of voc. ed.	Each state create State Advisory Council to advise its State Bd. of Voc. Ed. & evaluate programs	Creation of permanent Nat'l Advisory Council on Voc. Ed. with authority for own expenses
	Delete term "area" from area voc. facilities in 1963 Act to avoid confusion	Appropriations should total $1.6 billion per year for 11 million students served incl. 2 million in home ec.	Pre-voc training & employability skills should be incl. in def. of voc. ed.	
	Elim. ref. to "area" vocational schools in the 1963 Act	Elimination of existing ceiling of $225 million		
ants for voc. school li- ary constr., materials & udy institutes — nstr. — $50 million — 1970 her programs— $5 million — 1969 $25 million — 1970		Together with 1969 budget, funding at $290 million for coming fiscal year $325 million for existing prog. in 1969 $400 million — 1970 Total authorization $775 million — 1969 $1.4 billion — 1970		

Crisis in Vocational Leadership

Excerpts from an address by Dr. Lowell Burkett, Executive Director of the American Vocational Association, to the AVA convention in December, 1967.

We are in a period of crisis in vocational education; we lack leadership at all levels, most especially at the federal level. As we stand at the crossroads, we seem inclined to move in many directions at once. We can no longer afford a piecemeal approach to vocational instruction for our young people and adults, and stopgap measures and token efforts cannot be tolerated.

It is clear that our nation must now have a *permanent, universal, continuing program of vocational education, readily available to all persons of all age groups and levels of ability, wherever they may live.*

The program of which we speak is a dramatic challenge to all of us. It will require investments in financial and human resources far beyond the commitments that have been made thus far. But the alternative is frightening. How do you calculate the cost to our nation in human waste and failure and the cost in dollars to support a growing proportion of unproductive citizens?

We see no effort on the part of the Department of Health, Education, and Welfare to exert strong leadership in the field of vocational education and manpower development. For example, the Vocational Education Act of 1963 called for the appointment of a National Advisory Committee on Vocational Education, representative of education, business, industry, agriculture, and labor. The Committee is supposed to advise the Commissioner of Education with respect to the administration of vocational education and other matters affecting vocational education. During 1967, that Committee met only once, and then it had no specific agenda but met jointly with the Advisory Council on Vocational Education.* At the present time, there are four unfilled vacancies on the Committee.

Of the 15 individuals appointed to advise the Commissioner of Education on training programs for educational personnel, not a single one of them is, or has ever been, directly involved with vocational education.

Within the Department of Health, Education and Welfare, there is a Division of Vocational-Technical Education which is a part of the Bureau of Adult, Vocational and Library Programs. The Division is so low in the bureaucratic structure that no one from vocational education is present when national policies are formulated. Yet millions of dollars are being programmed for expenditure, in the name of vocational education, and ambitious plans are being made to revamp and change vocational education.

While the summer fires flare and riots ravage our land; while the schools continue to lose one-third of their students each year; with 30 per cent of the people in America's ghettos unemployed; with employers daily issuing ads of "help wanted;" with the certainty that unskilled jobs will continue to disappear; with a consistently increasing need for teachers of all types; with the shortage of medical technicians and health workers so drastic that the treatment for the sick and chronically ill is gravely impaired; with the knowledge that only 20 per cent of our school students will ultimately complete four years of college, together with the fact that only one-fourth of our high school population is enrolled in vocational education—with all these facts screaming out at us daily from the newspapers and the television screens—there isn't sufficient interest in the Department of Health, Education and Welfare to call an advisory committee together to find ways and means to mobilize the forces in vocational education to make an impact on these problems.

State Participation

The federal investment in vocational education and training in fiscal year 1968 is approximately $2 billion a year. Of this amount only $400 million was allocated for expenditure through the federal-state-local structure that was created for the purpose of providing vocational education for America's citizens. Countless new agencies and organizations are being created by the federal government to provide vocational technical education.

And what is happening at the state level? The same pattern. We find separate boards administering the high school program of vocational education; still other boards are operating vocational schools and community junior colleges. I heartily support the idea that vocational education should be a part of many different types of institutions. But the fact remains that from the federal level right down to the state and local levels, there is no structure for coordinating, planning, and implementing a total program of vocational education.

What Direction Should We Take?

To truly serve all people in all communities will call for significant new levels of federal support and federal leadership. The problem is too immense and too general to be left to local initiative alone. But it must be clear: no truly effective permanent change can be made in our educational process without a full measure of local involvement and participation.

I will suggest a definition of what I envision as a total commitment in vocational education—permanent, universal, continuing, and available to all. Such a program should serve all persons in all communities regardless of their prior educational achievement, level of ability, aptitude, or vocational aspiration. The instruction must be appropriate and realistic in terms of job opportunities and readily available with respect to location, time, place, and level of educational pace and content.

Such a program, surely, must have solid roots in occupational guidance and exploration in the practical arts, some of which must begin in the lower elementary grades. These programs must introduce students to the world of work and should include the related knowledge and other subjects that help the student to develop as a good citizen.

A total commitment to vocational education must assure ample opportunities for vocational education instruction of high school youth in every rural and urban section of the country. The programs for them should reflect the patterns of mobility of our national and regional populations; they should not be limited to those occupations peculiar to one locality or another.

---

*The 1963 Act established both a permanent Advisory Committee and temporary Advisory Councils. The Administration's 1968 legislative proposal, the Partnership for Learning and Earning Act, would abolish the Committee, make the Council permanant, and assign the duties of both under the 1963 Act to the permanent Council.

A total commitment to vocational education must provide vocational education opportunities for high school dropouts as well as graduates who lack the education and training for successful employment. Another sizable group—dropouts from the two- and four-year colleges—want and will need to pursue occupational training.

How much planning have you done in your state toward the goal of providing vocational education opportunities for all persons, of all ages, in all communities? Do you have a five-year plan, a ten-year plan? Is the community involved in planning? Have you established Advisory Committees? Has your State Vocational Association advocated a legislative program to your governor and to your state legislature to implement your goals? What are you doing to create public support for your program?

Each of us will have to give that "extra effort" in order to realize our goal of a permanent universal program of vocational education.

Federal Allotments to States for Vocational Education
Fiscal Year 1968

	Vocational Education			
	Vocational Education Act of 1963		George-Barden and suppl. acts	Smith-Hughes Act
	State grants	Work-Study		
Total	$198,225,000	$10,000,000	$49,990,823	$7,161,455
Alabama	4,589,666	197,787	1,140,849	143,330
Alaska	243,040	15,881	259,576	30,000
Arizona	1,842,665	83,735	279,450	51,789
Arkansas	2,475,963	105,390	797,790	85,107
California	14,917,026	919,639	2,549,008	534,067
Colorado	1,992,977	101,059	434,455	66,744
Connecticut	2,183,680	132,821	461,753	92,547
Delaware	399,998	25,024	232,631	30,000
Dist. of Columbia	543,244	31,280	228,058	....
Florida	6,196,204	272,860	967,146	187,558
Georgia	5,815,882	247,836	1,291,071	172,456
Hawaii	779,107	43,311	230,196	31,661
Idaho	858,478	38,980	335,250	39,430
Illinois	8,266,810	503,371	2,130,336	360,319
Indiana	4,781,770	246,873	1,440,031	193,488
Iowa	2,846,311	140,039	1,327,878	122,556
Kansas	2,326,685	114,534	784,270	91,385
Kentucky	4,089,596	175,651	1,324,728	143,135
Louisiana	4,585,248	198,269	912,068	134,293
Maine	1,173,870	51,011	310,388	48,182
Maryland	3,350,943	185,275	666,815	118,672
Massachusetts	4,492,554	251,686	822,089	179,461
Michigan	7,778,655	427,817	1,798,634	297,765
Minnesota	3,641,294	180,944	1,312,235	141,929
Mississippi	3,137,749	137,633	1,163,305	107,308
Missouri	4,535,632	216,555	1,390,638	173,605
Montana	802,261	38,018	299,881	38,665
Nebraska	1,474,594	71,223	642,728	64,271
Nevada	326,107	19,249	228,058	30,000
New Hampshire	697,660	32,724	228,058	34,050
New Jersey	5,330,872	320,983	876,457	201,903
New Mexico	1,267,614	57,748	245,693	43,107
New York	13,539,820	819,542	2,700,384	575,316
North Carolina	6,647,542	283,447	2,032,505	221,793
North Dakota	811,763	35,611	434,085	42,740
Ohio	9,903,582	516,364	2,201,568	369,365
Oklahoma	2,969,877	126,083	735,384	96,258
Oregon	1,991,915	100,578	508,946	73,613
Pennsylvania	11,164,872	552,457	2,343,066	437,176
Rhode Island	861,074	43,792	231,350	37,901
South Carolina	3,639,695	158,326	973,362	114,757
South Dakota	817,192	36,093	436,475	42,940
Tennessee	4,881,629	204,525	1,426,595	159,386
Texas	12,676,680	563,525	2,357,417	359,602
Utah	1,184,139	54,861	228,854	38,478
Vermont	480,096	20,693	228,058	33,318
Virginia	5,430,470	243,023	1,294,292	173,136
Washington	2,955,581	161,213	723,517	113,306
West Virginia	2,369,947	103,465	604,758	91,340
Wisconsin	4,136,678	207,893	1,364,517	162,247
Wyoming	341,187	17,324	228,058	30,000
Outlying areas[1]	3,677,106	165,979	1,815,109	....

[1] Includes funds transferred from Department of the Interior, Bureau of Indian Affairs, technical services, and reserves.

Source: *American Education*, April, 1968, U. S. Office of Education.

The Governors Support Vocational Legislation

On March 11, 1968, Utah Governor Calvin L. Rampton, Chairman of the Education Committee of the National Governors Conference and Chairman of the Education Commission of the States, discussed the problems of vocational-technical education with reference to the pending Partnership for Learning and Earning Act of 1968. Excerpts follow from Governor Rampton's statement before the House of Representatives General Subcommittee on Education. Since then, the Subcommittee Chairman, Congressman Roman Pucinski of Chicago, and 31 other sponsors have introduced a bill going beyond the administration proposal in both scope and financing.

No other area of education is of greater concern to the governors of the states and territories than vocational education. The need for improved and expanded vocational education is not only great, it is urgent.

Perhaps the best way for me to discuss the legislation before the Committee will be in terms of problems and needs as recognized by the governors of the states and territories.

I. One of the most serious difficulties experienced by school officials at all levels in making efficient use of federal funds has been the timing of the federal appropriation process which has caused grants of funds to be made after the start of the school year and long after planning for the school year must be completed. The Administration has acted wisely in proposing to extend the early funding provisions of the Elementary and Secondary Education Amendments of 1967 to the provisions of the Partnership for Learning and Earning Act of 1968 (H.R. 15066) which affect the Vocational Education Act of 1963. I am sure that the members of the Committee recognize the overriding importance of extending the early funding principle to vocational education.

II. Proliferation of categorical programs of assistance has required states to maintain as many as 26 separate accounts in vocational education alone. The requirement that states match funds by categories has introduced a high degree of rigidity into state programs. It has resulted in federal dictation to the state budgeting process and in the program area without regard to the most urgent needs in individual states.

Further, different sets of regulations governing the various categories of aid have intensified the difficulties of coping with the system. These problems have led to movement in support of more generalized federal aid to education at all levels. The flexibility and the simplification which the bill would permit and the subsequent harmonization of regulations applying to vocational programs hold great promise for more efficient and effective operation at the state level.

III. Under existing legislation, state plans for vocational education have often been little more than legal agreements between the states and the federal government and state advisory councils have been neither as broadly representative nor as forceful as prevailing circumstances may require. The proposal that states prepare vocational program plans specifying their long-range objectives, that these plans be updated annually, and that operation under them be evaluated annually should guarantee that they become genuine comprehensive educational plans. The requirement for broader representation on state advisory councils and for substantial participation both by the councils and the public in the planning and evaluation process should shift the responsibility for determining such matters as the proportions of funds allocated for urban and for post-secondary programs to the state level. Further, they should make it possible to establish priorities and allocations on the basis of the real needs of the individual states.

The proposed legislation would require each state to create an advisory council. State governments vary substantially in their structure. But they all have at least one condition in common: the governor is the one official who all the citizens hold responsible and at the same time the person on whom all the citizens call to redress imbalances and grievances. I, therefore, propose that this committee give serious consideration to amending the legislation to provide that the governors of the states and territories appoint the state advisory councils.

IV. The governors of the states and territories can only express approval of the Administration's proposal for the creation of a permanent National Advisory Council on Vocational Education. The recently issued report, entitled *The Bridge between Man and his Work*, by the Advisory Council on Vocational Education appointed pursuant to the requirements of the Vocational Education Act of 1963, is an excellent statement of the prevailing circumstances in vocational education and of how we can meet our urgent needs in this field. The Administration has moved in the right direction with the provision that the Council would become a permanent body of 15 members, to be appointed by the Secretary of Health, Education, and Welfare.

V. There is a great need for innovation in the field of vocational education. My purpose here is to applaud the intent of Title I of the President's vocational education bill and to couple that with an expression of hope that the federal government will not, either in legislation or in administration, restrict the states in their efforts to find new ways to meet old needs and ways to meet new needs.

VI. The need for research funds and programs, I believe, is obvious. There is also a great need for information about ongoing vocational programs. There has been dissatisfaction with efforts and responsibilities in job placement of vocational students. It has been felt that the age limit of adult education programs should be reduced. All these needs are recognized in the Administration bill and proposals are made to deal with them.

VII. In view of the strong recommendation in the Advisory Council report for both work-study programs and residential schools, I urge the Committee to consider carefully how work-study programs may be continued and residential schools undertaken.

Hopefully, the movement toward consolidation and simplification might be applied to these programs with a view toward reducing the complexity faced by state and local officials and the number of federal bureaus with which they are required to deal.

VIII. My final point deals with the insufficiency of funding which characterizes federal vocational programs and the resulting overmatching of funds on the part of the states and disproportionate share borne by local communities. Available figures indicate that of the approximately $1 billion now spent annually for activities classified as vocational education, state and local governments provide nearly three-quarters. There is little doubt that the states and local governments are unable to make the massive increases in vocational expenditures that would be required to meet our real needs in this area. There must be an increase in the federal contribution if the nation is not to fall behind.

The report of the Education Committee of the National Governors' Conference addressed the funding problem and made the following recommendation:

> ". . . in the face of mounting evidence that vocational and technical education may well be the field of our greatest unmet educational needs, given the high unemployment and unrest among our urban youth and the necessity for continual retraining among the labor force, we further recommend that the Conference call upon the Administration and the Congress to increase substantially the funding to be provided under the Partnership for Learning and Earning Act of 1968."

Perhaps more compelling is a single sentence from the recommendation of the Advisory Council:

> "It is our unanimous conviction that no sounder investment can be made by the citizens of the United States than this—an investment in their own, their children's and their economy's future."

PROJECTED EDUCATIONAL ATTAINMENT OF THE U. S. LABOR FORCE IN 1975 FOR WORKERS 25 YEARS AND OVER

Educational Attainment	All Workers 25 Years of age and over	25-34 Years	35-44 Years	45-54 Years	55-64 Years	65 years and over
Total	100%	100%	100%	100%	100%	100%
Elementary School or Less	19	8	16	22	30	38
Less than 8 years	10	4	9	12	15	19
8 years	9	4	7	10	15	19
Some High School	21	21	21	21	20	17
High School Diploma	33	37	34	34	30	18
Some College	12	13	12	11	10	13
Baccalaureate or better	15	21	17	12	10	14

Source: *Manpower Report of The President*, 1967, reprinted in *The Emerging Labor Force*, Chamber of Commerce of the United States.

Proposals for State Action in Occupational Education

In a report entitled "Changing the Contexts in Which Occupational Education Takes Place", the Education Commission's Task Force on Vocational-Technical Education outlined a theoretical framework and alternative organizational means for bringing about improvement in the field. Dr. Leon P. Minear, formerly Oregon Superintendent of Public Instruction and now director of the Division of Vocational and Technical Education in the U.S. Office of Education, served as Task Force chairman. A summary of the group's proposals follows.

We propose:

1. That a **Human Resources Council** be established in each state.

   The membership would consist of heads of those departments of state government that each state deemed appropriate, plus key lay citizens. The Chief State School Officer may serve as Executive Secretary.

   The Council's responsibility would be to develop long range goals with a view toward adding the community context for education to the present "school" context and relating the two.

   The following principles may guide the Council as it leads in setting the states' educational goals:

   A. *Priority.* Education should be given first priority in the allocation of human and material resources.

   B. *Community Involvement.* Education should be extended outward from the school to the entire community. Citizens can be involved as advisors on policy and programs, as tutors in and out of "school," as resource persons, and as students themselves.

   C. *Extension of School Day and School Year.* Schools, as resource centers for learning for students of all ages, should operate from 8 a.m. to midnight every week of the year.

   D. *Flexible Termination, Re-entry, and Advancement.* The formal school-leaving age should be made flexible so that the individual, as he reaches the maturity to either go on to college or a job, may do so with the assurance that pursuit of a liberal education can continue along with career development, throughout life. Both dropouts and graduates whose skills become obsolete could be welcomed back into this kind of system to take up where they once left off, without fear of new failure.

   E. *Individualization of Instruction.* No limitations or inhibitions should be placed summarily on learning because of age, ability, or other factors. Rather, learning experiences should be planned to meet the needs of the individual.

   F. *Followup and Feedback.* Effectiveness of educational programs should be continuously evaluated through a followup of all students for an indefinite period and securing feedback on how well the programs are serving their consumers. Such information can be used for program redevelopment and improvement as well as for continual escalation of individual skills.

   The Council would establish and coordinate the work of state-level commissions which would concentrate upon bringing contextual reform to education in each of the following areas: occupational, social, cultural, political, and intellectual—beginning with occupational.

2. That an **Occupational Education Commission** be established in each state, with counterparts in Local Community Advisory Councils. (Each state now has a Vocational Education Advisory Council established under Public Law 88-210. The Occupational Education Commission could be the same body, or a reconstituted body, and be asked to assume the responsibilities set forth in this section of the report.)

   The Commission would be a top-level group, broadly representative, including members from labor and management in the private sector, as well as from public service. The State Vocational Education Director may serve as Executive Secretary. The Commission would have a full-time professional and clerical staff.

   The Commission's responsibility would be to provide leadership and stimulate development of vocational-technical education programs designed to achieve the goals defined in cooperation with the Human Resources Council, with attention to such factors as:

Existing vocational-technical programs in the state upon which improved programs can be built.

Size and ecological characteristics of the communities in the state — metropolitan, urban-rural, and rural.

Identification of individual dropouts and potential dropouts as well as unemployed and underemployed adults. With this group, specific training and job entry are of key importance. This should be the target population for initial efforts in contextual reform; then the identified "passive" youngsters, and ultimately all the youngsters and adults who can benefit.

Through its counterparts, the Local Community Advisory Councils on Vocational-Technical Education, the Commission would cooperate with local and intermediate school districts and lay citizens to:

Survey human resources—state, institutional, group, and individual.

Identify, establish, and staff "learning stations" —in order to induct youth and adults into programs including, but not limited to, "school." Develop exploratory and tryout experiences, extend the school day and year, provide for flexible termination and re-entry, identify and prepare lay instructors, and develop new curricula.

Provide, in cooperation with business, industry, and other agencies, for followup and placement of students.

3. That a **Manpower Coordinating Committee** be established in each state.

The composition of the committee should provide for high-level representation of labor and management, and of the appropriate state agencies.

The committee's responsibility would be to effect maximum system-cost effectiveness in the utilization of the various occupational and job training programs.

The Committee's primary function should be coordinative rather than administrative, with the actual implementation of the education and training programs being the responsibility of the appropriate agency.

A state may elect to have this committee operate as a subcommittee of the Occupational Education Commission, or separately, with close working relationships with the Commission.

4. That each state consider the establishment of a **Task Force for Occupational Education and Economic Development.**

This Task Force would draw specialists from appropriate existing state agencies (including the Department or Division of Economic Development), labor, management, and the new groups proposed above.

The responsibility of the Task Force would be to help build up the state's industrial output through new or expanded industries. This would be done by means of providing information to assist industries in considering the state as a site, providing a pool of trained workers, and/or making available undeveloped (or underdeveloped) workers who can be trained for jobs provided by new industries. A state may want to consider this kind of special occupational education service if it seems likely that through its use the income of the state could be substantially increased. The Task Force could operate as a subcommittee of the Occupational Education Commission, or separately.

5. That **Regional Learning Centers** be established in each state in Intermediate Education Districts or County School Offices or other regional educational organizations in the state.

The Centers would be staffed with student personnel specialists who would work with sociologists, economists, and cultural and political leaders to synthesize educational planning for the region. The Local Community Advisory Councils described in Proposal No. 2 above would work closely with the Centers.

The responsibility of the Centers would be to provide leadership in development of broad, interdisciplinary curricula that are responsive to the needs of society and the individual and geared to the resources of the region.

The results of this planning would be used by counselors in diagnosis and prognosis for individual learners, and by master teachers in planning complementary educational experiences in specific fields.

Median Years of School Completed by Workers 18 Years of Age and Older

March, 1966		By Color	
Occupation	Total	White	Nonwhite
Total	**12.3**	**12.3**	**10.5**
Professional, technical	16.3	16.3	16.5
Managerial, proprietary	12.6	12.7	12.4
Clerical	12.5	12.5	12.6
Sales	12.5	12.5	12.2
Skilled craftsmen	11.9	11.9	10.5
Service workers (except in households)	11.4	11.7	10.6
Semiskilled operatives	10.7	10.8	10.1
Unskilled laborers	9.5	10.0	8.6
Private household workers	8.9	9.3	8.6
Farmers, farm managers and laborers	8.8	9.0	5.9

Source: *Manpower Report of The President*, 1967, reprinted in *The Emerging Labor Force*, Chamber of Commerce of the U. S.

ECS COMMISSIONERS SPEAK OUT:

Federal, State and Private Industry Responsibility in Voc-Tech Education

HAROLD BERGQUIST, Assistant Principal of Red River High School in Grand Forks, North Dakota, calls for a more active federal role in financing vocational-technical education and greater reliance on national research and cooperative agreements to coordinate training with job opportunities across the country.

American economic personnel are continually undergoing training or re-training for societal service which projects beyond the confines of the state in which such preparation occurs. North Dakota's largest vocational-technical school, for example, reports that only 25 per cent of employer demands for its 1967 graduates originated in the state.

Since many states do not offer a labor market for the personnel whose training they have provided, the federal government should become a more active collector of revenue and distributor of funds. Distribution of funds should be based on formulae which promote equalization of educational support. In addition, the federal government should continue to support germane research and to provide consultant service.

State governments have major responsibility for program development, but they should utilize the services of federal agencies and private industry to ascertain the relevance of curriculum to the needs of the whole economy. Too, there is need for groups of states to provide comprehensive training by implementation of cooperative agreements.

The primary responsibility of industry is that of assuring the appropriateness of vocational-technical education through financing related research, personnel re-training efforts, and pilot projects. Finally, investment in human development deserves priority over capital investment in future industrial tax legislation.

DR. PAUL R. HAAS, a member of the Governor's Committee on Public School Education in Texas, indicates that the states should assume the major responsibility for vocational-technical education but notes the important roles to be assumed by other levels of government and private industry and the need for a central planning organization.

The state should accept the major responsibility for vocational-technical education. Program preparation and financial incentives should be supervised from existing state educational organizations, thus assuring coordination with other educational activities.

The federal government can serve in accumulating and disseminating country-wide information covering estimated future needs in the vocational-technical field. When it becomes obvious that particular deficiencies in supply are developing, then temporary stimulants from the federal level are in order.

The school district or lowest-level political subdivision should plan to house and operate the rudimentary portions of the vocational-technical program. The mobility of our citizenry is such that advanced programs and financing on a local district level to meet only community needs are unrealistic.

Industry itself must anticipate and create its own development programs for specific highly technical employee requirements where quantitatively there is no realistic justification for political subdivisions to assume that burden.

In order to assure cooperative efforts and avoid duplication of services and facilities in vocational-technical education, there is a necessity for some type of state or multi-state planning organization which would be representative of all participating government and industrial levels.

DR. ROY E. LIEUALLEN, Chancellor of the Oregon State System of Higher Education, outlines the specific roles which the federal government and the states should assume in the vocational education field and notes that financial support should be shared by all levels of government.

Although "partnership" is a term made trite by overuse, it reflects what must be the continuing relationship of the federal government and the states in the field of vocational-technical education. Each has its unique capacities. Each has its role.

—Under federal aegis, continuing, systematic analysis should be made for the purpose of translating available information into priorities for vocational-technical preparation programs for the nation.

—Within each state, appropriate state agencies and institutions should, as an aspect of overall educational planning, develop a state plan for vocational-technical education—a plan which will reflect the wide-ranging abilities and interests of the individuals to be served and the vocational-technical demands of the nation.

—The federal government should provide continuing consultative help to the states as requested, as a means of helping to upgrade vocational-technical education. This stimulation is critical.

—The federal government, working with the states, ought periodically to provide for a systematic national review and evaluation of the effectiveness and relevance of existing vocational-technical programs to the needs of the nation and of the individuals being served. The states have an obligation to evaluate, on a continuing basis, the meaningfulness of the vocational-technical preparation programs they offer, but periodically, at the national level, we need an assessment of vocational-technical education in terms of the changing national scene.

—The preparation of teachers and administrators in vocational-technical education should be the responsibility of the states.

—The financial support of vocational-technical education should be shared by the federal government, the states and the localities. Federal funding must be substantial, continuous, dependable.

BERTRAM L. BAKER, Chairman of the Education Committee of the New York State Assembly, suggests that greatly increased federal aid to vocational-technical schools is essential but that primary planning responsibilities should be vested in the states.

It is the responsibility of government, both federal and state, that all citizens—from the least able and the disadvantaged to those with the highest level of technical ability—have access to educational training high in quality and realistic in terms of employment opportunities.

Vocational education in the public schools is the chief source of formal job training in the United States and may only be advanced through a tri-partite effort of federal and state government and of private industry. Greatly increased federal aid to permit expansion of vocational education at all levels is a must. Since vocational education should be closely geared to an area's employment requirements, the state must have the responsibility for planning its own vocational education programs and of constantly evaluating them in light of current and projected manpower needs as supplied by private industry. Local needs must, of course, be supplemented by a longer range appraisal of occupational trends in broad regions and in the country as a whole.

FRANK G. DICKEY

Voluntary Quality Control For Vocational-Technical Schools

Mr. Dickey is the executive director of the National Commission on Accrediting. The concern evidenced in his statement has been prompted by rapid increase in the number both of vocational-technical schools and of accrediting organizations and methods. With no agreement on the content of or standards for vocational-technical schools, and yet with a growing competition to qualify for federal funding, the question of new state legislation in the field or some form of voluntary control has attracted heightened attention.

No area of education in this nation is growing more rapidly than the vocational-technical-occupational sector. Because these programs are designed to serve the needs of society in a very direct manner, the schools undertaking the vocational and technical programs present a wide variety in types and organizational patterns. Some are a part of the comprehensive secondary school; others are separate technical or vocational schools or institutes; and some are a part of the community college program. Although most of the new schools are publicly supported, there are some privately supported schools, and there is a wide variety of proprietary institutions in the occupational domain.

Obviously, some form of quality control is necessary and desirable; yet, no nationwide system of accrediting for many of these schools and programs is universally available at this time. As a consequence, many states are viewing with some concern the burgeoning programs and are contemplating the establishment of state approaches to accreditation.

Meeting Standards of Quality

Among the many purposes which have been ascribed to the accreditation of institutions serving the public, three stand out: (1) to measure as objectively as possible the adequacy and efficiency of institutional and specialized programs; (2) to afford a degree of protection to institutions, to faculties, to students, and to the general public; and (3) to show schools how to correct their deficiencies. The comprehensive program of accrediting, with all of its complexities, is fundamentally necessary if there is ever to be any assurance that this combination of activities will remain within the voluntary sector of governance.

It is imperative that we view accrediting not just as a function protecting the quality, freedom, and integrity of the institution and its programs, but also as a vehicle to serve the welfare of the nation where such service is needed. It is quite clear that organizations such as the nationally recognized accrediting associations cannot afford to serve only the institutions themselves; nor can they serve effectively if they recognize only a segment of post-secondary education and ignore other parts. It seems desirable to shift some of the emphases in our approach to accreditation problems for, if predictions are correct, *the time will arrive when it will be increasingly difficult to distinguish technical education from certain areas of collegiate education* and the differences between proprietary and nonprofit schools will become fewer and fewer.

Accreditation Beyond State Level

For many years, state departments of education or other state agencies have approved or accredited institutions in a large number of states. But the rapid expansion of all types of educational programs and institutions has increased the need for regional and national standards. This need has led to voluntary or extra-legal accreditation of two types:

(1) Accreditation by national specialized organizations of programs of professional or specialized study was begun by the American Medical Association in 1906. Professional accreditation is now conducted in over 30 different fields by nationally recognized organizations. These are recognized by the National Commission on Accrediting or by the United States Commissioner of Education.

(2) Accreditation of institutions or schools by the regional associations of schools and colleges was undertaken first in about 1913. General accreditation is now conducted by all six of the nation's regional associations, which have recently formed the Federation of Regional Accrediting Commissions of Higher Education to establish national policies for regional application.

Voluntary accreditation of these two types is a uniquely American device. Through it, educational institutions cooperate with each other and with professional organizations to set and assure standards for programs instead of relying primarily on state and federal regulation. Indeed, many state and federal agencies as well as private organizations and individuals have come to rely upon the judgment of these voluntary accrediting associations.

At the same time, such associations protect society against inadequately prepared professional or specialized practitioners, help licensing authorities and facilitate the transfer of students. The accrediting bodies aid institutions in withstanding improper political or other educational pressures, and they stimulate broad consideration of educational problems and issues of more than local or state concern.

Need for Accrediting Mechanisms for Vocational Schools

Although, in view of the present lack of regional or national accrediting mechanisms for vocational institutions, it might seem advisable to develop accrediting procedures for each of the states, such a move would be detrimental to the best interests of the total American educational scene. With the possibility of fifty different approaches and separate sets of criteria, confusion would run rampant. Certainly, state approval of schools and programs is effectively utilized by many states to improve education, and it does afford recognition to institutions and programs within state boundaries. However, this age of great student mobility calls for regional and national accrediting procedures. In many instances, state approval agencies have been organized and structured to serve as a stepping stone to, or preparation for, regional and specialized programmatic accreditation. This kind of state approval is helpful, but it is totally different from the concept of "state accreditation only" which could easily stifle the tremendous advances which have been made through free interchange among institutions in different states and regions.

The best type of relationship is one in which the regional and specialized accrediting associations recognize the place and value of state approval agencies, and in turn, the states understand the need for and the unique role of regional and specialized accrediting agencies.

Importance of Voluntary Accreditation

The growing extent of federal government participation in the development of occupational schools and programs demands new and realistic positions on the part of the accrediting associations. Probably no issue in American education poses a greater problem than the juxtaposition of the tradition of freedom for institutions and the availability of funds through federal agencies. Our institutions must develop a position of cooperative interaction with the political agencies and at the same time retain that degree of independence which has characterized American education through the years.

The idea of voluntary accreditation is of extreme importance at this moment in our nation's history. Most societies have some form of accreditation for educational programs. But only in ours is accrediting voluntary and nongovernmental.

The accrediting associations are large, broadly based operations depending upon the principles of self-regulation and self-control reflected through cooperatively devised standards arrived at by the consent of all the constituent organizations. These, we believe, can be depended upon to preserve education as an essential force in a society of free men.

—

ECS COMMISSIONERS SPEAK OUT:

Coordination of Voc-Tech Education at the State Level

GOVERNOR SPIRO T. AGNEW of Maryland outlines the advantages of coordinating vocational education through the central position of the State Department of Education.

The modern concept of a total program of vocational education demands that vocational-technical programs, facilities, and services be provided for all persons at all levels from early childhood through adult life. For maximum effectiveness vocational education must be a vital and integral part of the total educational system. The State Department of Education is the only central agency in a position to converge the educational resources of the state on the problems of a changing society.

The coordinating agency must involve regional and statewide structures through formal, committed, interlocking memberships to provide support and programs on a local and state basis.

The key to coordination is planning with the appropriate supporting technology. The application of a simplified formula where financial input determines educational output permits a wise allocation of resources.

The dissemination of information concerning vocational education is vital to the efforts of the coordinating agency. Legislators can be assisted and the general citizenry can become informed to enable them to intelligently examine and interpret and to make the decisions required of them to provide a total program of vocational education.

MERLE E. ALLEN, Director of the Utah State Coordinating Council of Higher Education, stresses the need to coordinate vocational-technical education programs through (a) the state higher education coordinating agency, (b) the state department of education, or (c) both.

So great is the need for central planning and orderly development of post-high school education that 38 of the 50 states have established some form of central planning or coordinating agency for this purpose. Because vocational-technical education is even more diverse than general education or preprofessional work, the tendency toward proliferation and diffusion of course effort is great and the risk of early obsolescence of skills developed threatens to erode the value of programs. If vocational-technical education is to be provided in an orderly manner, it is essential that it be included in statewide plans for secondary and higher education.

It is the vogue to set up in many communities junior colleges designed to offer "a full program" in vocational-technical training as a primary function. All too often these schools are located in communities so small that economical volume production is difficult or impossible. But if vocational-technical courses were to be taught only when fully justified by local community need, in many cases few if any courses would be offered. Here again it is evident that the total state need is the key to logical action.

State support is essential to adequate vocational-technical services, but it should discourage proliferation, extensive duplication of services, and unnecessary investment. Either the state's higher education coordinating agency or the State Department of Education or both should be involved in designing vocational-technical education in such a way as to provide a quality program at reasonable cost and properly suited to the needs of the state.

DR. JOHN A. SNIDER, Executive Secretary of the Idaho School Trustees Association, argues that, to maintain creative patterns of development, vocational-technical education should be coordinated by state-wide efforts which are independent of the established systems of both elementary-secondary education and higher education.

Vocational-technical education must, if it is to be effective in meeting the needs of individuals, have flexibility and freedom in developing training programs at the secondary, post-secondary and adult levels. It cannot be controlled by the two long-established educational systems—elementary/secondary education and higher education. Vocational-technical education, a third major thrust, must work with all existing educational activities but still maintain specific objectives of preparing individuals for entrance into or progress within a given occupation. Major deterrents to the effectiveness of vocational-technical education include tradition; efforts to absorb it into the two established systems; and unwillingness to recognize it as a distinct thrust with educational merit.

Coordination can, if we disregard the concept that all education must fit into one of the two established systems, be attained by the efforts of a single statewide educational board or by mandatory cooperative efforts of those in charge of elementary and secondary, higher and vocational education.

NORMAN C. HARRIS

Occupational Education, Middle Manpower and the Junior College

Professor of Technical Education at the University of Michigan's Center for the Study of Higher Education, Mr. Harris was previously dean of technical-vocational education at Bakersfield College in California. Author of several textbooks and frequent contributor to professional journals, he is consulting editor for the McGraw-Hill Book Company's Technical Education Series.

If the impact of technology teaches us anything at all, it teaches that some cherished beliefs about education are utterly false. The idea is dead that liberal arts education is for the few, for the cultured and ruling elite, and that mechanical arts or practical education is for those who will work and be ruled. After a thousand years we must come to the realization that higher education is a driving force for the economic and cultural development of nations. In modern industrialized societies, rich and poor alike work; and those with the greatest amount of education are quite likely to work the hardest. One can predict a reversal of Aristotle's "education for leisure" idea in our time by noting that the only sure guarantee of leisure today is a lack of education.

In a prior time occupations could, for the most part, be classified in three categories: professional and/or managerial, requiring academic and theoretical education; trade and craft, demanding a long period of apprenticeship; and common labor jobs, needing only physical strength and a will to work.

As a result of the technological revolution, however, a complete new spectrum of occupations has developed in between the professional and managerial jobs on the one hand and the trade and craft jobs on the other. These new "semi-professional" jobs have increased by the hundreds of thousands in the past three decades until today such segments of the economy as industry, business, agriculture, health and medicine, and public service are almost as dependent on the contributions of semi-professional and technical personnel as they are on the work of professionals themselves.

The Spectrum of Middle Manpower

Loosely defined, "middle manpower" can be described as that portion of the total manpower spectrum which is concerned with jobs with a balanced cognitive-manipulative content. At one end of the middle manpower "band" are jobs which are nearly professional in nature (e.g. science research technician). At the other end are jobs closely related to the skilled trades (e.g. television service technician). In general (but there are many exceptions), middle manpower occupations require post-high school education and training of one, two, or three years, but for most a baccalaureate degree is not a requirement for entry into the job nor for successful performance on the job.

Six fields of occupational education are commonly encountered in the associate-degree programs of community junior colleges: agriculture, business, health, engineering/industry, science research, and service occupations.

It is entirely realistic to estimate that there are this year well over 10 million persons in the middle manpower segment of the labor force. Serious shortages of professionals in almost all fields indicate that the demand for semi-professionals will continue to increase. It is a relatively safe prediction that by the mid-1970's one person in every five in the labor force will be engaged in work within the middle manpower spectrum.

Where will these millions of persons be educated and trained? Some college graduates will, for a variety of reasons, gravitate toward semi-professional jobs. And, without doubt, significant numbers of high school graduates will, through on-the-job training combined with evening courses or correspondence study, move into semi-professional and technical jobs. But the vast majority of the semi-professional workers of the future will be educated and trained in the two-year colleges of America. The decade of the 1970's will see the associate degree firmly established as the recognized educational base for semi-professional and technical jobs, just as the high school diploma is now looked upon as the minimum educational standard for entry into skilled trades and crafts jobs. In most states, by 1975 half of all high school graduates will be "going on to college" in two-year colleges (in some states this figure is already over 60 per cent), and perhaps half of all these will be in occupational programs.

Characteristics and Functions of the Community Junior College

Every state now has one or more two-year colleges in operation, and some states (California with 87, New York 64, Florida 31, and Michigan 28) can boast that there is a junior college within commuting distance of 70 to 90 per cent of college age youth. Nationally, there were 648 public two-year colleges in operation in 1966 and 264 private colleges. These 912 colleges enrolled more than 1.67 million students, both youth and adults, in 1967. One student in every four beginning his program of higher education in the fall of 1967 did so in a junior college.

For the past five years new two-year colleges, mostly of the publicly supported variety, have been established at a rate of from 30 to 50 per year. Seventy-two new public institutions opened their doors to students during 1967. If the same factors which have conditioned this phenomenal growth in the recent past continue to exist—and there is no reason to suppose that they will not, it is quite probable that the year 1972 will see more than 1,000 two-year colleges in operation enrolling as many as 2.5 million students.[1]

A brief look at the purposes and programs of the public junior college may be helpful. Generalities are risky but much of the following applies to most public communty colleges:

1. Tuition charges are nominal—in some states entirely absent.
2. Admission standards are not restrictive. In many states the "open door" policy is in effect—any high school graduate or any person over eighteen may be admitted to the college. (Admission to specific courses or programs, however, is controlled.)
3. A lower division program of arts and sciences (the "transfer program") is offered for those students whose goal is a baccalaureate degree.
4. A comprehensive program of one-year and two-year programs in occupational education is offered for those students whose immediate goal is employment.
5. Considerable emphasis is placed on general education, both in the college-parallel program and in the two-year associate degree occupational programs.
6. Guidance and counseling are provided for all students—youth and adults, day and evening.
7. A program of continuing education and community service is offered. Frequently it involves greater numbers of persons than are enrolled in the regular-day classes.
8. In many states control is vested in a local board of trustees elected by the people of the junior college district. Typically, the student, the local district, and the state share in the cost of annual operation; and the state and local district share the capital expenditures. Some states have recently established "state systems" of community colleges with control of all operations being vested in a state board and its executive officers.

The Associate Degree

Job training *per se* is not the sole or even the most important ingredient in associate degree occupational educational programs. All college-level occupational educational programs should — and most do—present a well balanced "mix" of specialized technical courses, background theory and supporting courses, and general education courses. Though we live in an increasingly machine-oriented society, man himself is not a machine. Any college-level educational program should incorporate some degree of confrontation between students and the ideas men have reflected about through the centuries. Experience seems to indicate that education and wisdom are positively correlated, and that the closer one's life work is to professional pursuits, the greater is the need for liberal, humanistic, and theoretical content in one's education.

This content, for associate-degree junior college programs, ordinarily includes:

1. A general education core required of all students. About one-fourth of the two-year program is devoted to this core, which broadens the educational base of students and assists them in adapting to changing occupational and social conditions, and in becoming active, useful citizens in a free society.
2. A basic theory-and-supporting-subject core, unique to each "family" of occupational programs. Mathematics, physics, biology, chemistry, economics, graphics, and others are found in this core which comprises at least one-fourth of the total credit hours.
3. Specialized courses for the chosen occupational field, selected and planned to produce occupational competence at a semi-professional level of performance. Approximately one-half of the program should be in specialized technical courses.

Quantitatively, associate degree occupational programs should produce competent graduates in two academic years with a total of about 62 semester credit hours of work, *if* the entering students were really ready to begin college courses. Realistically, most students need some remediation, and consquently the associate degree program usually involves some 70 to 76 hours.

The Case for General Education

Much controversy exists over the value of general education in post-high school occupational education programs. Some persons, and among them are many vocational educators, feel that time spent on general education in the junior college will hinder the development of real job competence. "Technical students," according to this view, must concentrate on job preparation and leave the realm of ideas to those in academic fields, in other words, to an intellectual elite.

---

[1] Data from 1968 **Directory, American Association of Junior Colleges:** AAJC, 1315 Sixteenth Street, Washington, D. C.

Junior college educators generally do not subscribe to this view. Man's basic problem is really himself, his beliefs, his loves and hates, his relationships with others. The concept of elites, including intellectual elites, is useless if not actually dangerous in 20th Century American society. If there is a body of knowledge concerned with the "good life" and made up of content from the humanities, sciences, and the arts, which is good for some students, then to some degree at least, and at some (perhaps reduced) level of abstraction, this liberal or general education is good for all students.

Eric Hoffer, the San Francisco longshoreman-philosopher, sternly warns us against entrusting much power to an intellectual elite. If the people are to be free, he wisely counsels, knowledge, understanding, and power must reside with the people.

If we believe in education at all, and there is ample evidence that Americans have made commitments to education far beyond those made by any people in the history of the world, we must believe that general education has value for all citizens, including those whose work may be highly specialized. Most persons work for less than half their waking hours. The quality of their responses during their "living time" is certainly as important as the competence of their actions during their "working time."

Quality Within Diversity

The comprehensive community college is a relatively new idea. It is difficult, costly, and sometimes distracting to provide the wide diversity of programs and courses required and keep them all of high quality. It takes administrative leadership and faculty commitment to the concept that all youth are important—not just the bright ones; to the democratic idea that public monies shall be invested fairly in all youth—not just the ones with a high I.Q.

Administrators must identify with the occupational programs just as squarely as they identify with academic programs. Scholarships, awards, and recognition should follow superior performance in automotive technology just as readily as it does superior performance in political science or chemistry.

Bright students can learn even with poor teaching, but slow learners must have good teaching. The comprehensive community college makes special demands on faculty—to plan new course content, to teach in more effective ways, to motivate students to be over-achievers, to recognize worth and dignity in all kinds and levels of work, to strive constantly for quality within diversity.

Public junior colleges have become identified with the term "open door" in many states. It should be emphasized that the term applies to admission to the college rather than to entrance to a specific curriculum or course. The open door has many "closed door" curricula. Junior colleges, in order to produce competent graduates from occupational programs, will set end-product standards partly by the demands of the general education core and partly by the job demands of the occupation for which the curriculum is designed.

The concept of quality within diversity is a goal toward which most community colleges are moving. An essential factor in the total operation is the development of a quality system of counseling and guidance.

Change and Challenge

Higher education for the seventies and beyond must respond to change. It must be recast in form and altered in substance so that, in two-year colleges at least, it includes both academic and technical-vocational education. Higher education today, in the context of the late 1960's, is a means of preparing for life's work, and not a means of getting out of work for life.

Middle-level youth outnumber superior youth by three-to-one, and it is high time that we stop neglecting their educational needs. The public junior college is the institution which has accepted the challenge to provide, on one campus, in the same buildings, under one administration, with one faculty, both academic and occupational education matched to the interests and abilities of youth and adults. If such an institution is prospering in your community, admire it; if it is struggling, nurture it; and if it is non-existent, start it.

Occupational Shifts 1965-75

Occupation	Per Cent 1965	Distribution 1975	% change 1965-75
Total	**100.0%**	**100.0%**	**22.8%**
White Collar	**44.5**	**47.9**	**32.5**
Professional, technical	12.3	14.5	45.2
Proprietary, managerial	10.2	10.4	25.3
Clerical	15.5	16.5	30.8
Sales	6.5	6.5	23.0
Blue Collar	**36.7**	**34.0**	**13.6**
Skilled craftsmen	12.8	12.9	23.6
Semi-skilled operatives	18.6	16.9	12.0
Unskilled laborers	5.3	4.2	−3.0
Service	**12.9**	**14.2**	**34.5**
Farm	**5.9**	**3.9**	**−18.9**

Source: U. S. Bureau of Labor Statistics, reprinted in *The Emerging Labor Force*, Chamber of Commerce of the United States.

Rhode Island Pioneers Co-ordinated Approach

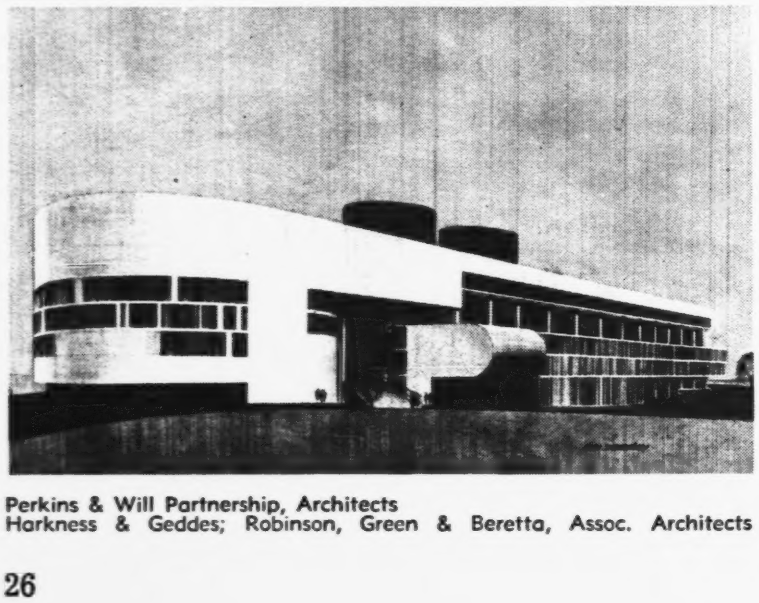
A "megastructure" rising in Warwick, Rhode Island, will reflect the new concept in coordinating academic and vocational-technical education which characterizes the unique programs offered at Rhode Island Junior College. The five-story building will house, with few exceptions, the entire two-year college for 3,000 students. Consistent with the Rhode Island Junior College philosophy of a well-rounded and complete educational experience for all of its students, the structure is designed to encompass the total facilities of the college—academic, cultural, recreational and social.

Rhode Island Junior College is an institution that is broad in purpose, creative in design and service-oriented. This service orientation is directed toward the approximately two-thirds of the population who are average young people. In another time and in another economy, they might well have had the opportunity for admissions to our higher institutions for whatever period of time their talents and their economic sufficiencies would permit.

The challenge of the college lies both in providing transfer programs and career-oriented programs. Career-oriented programs in technical education provide students with a sequential offering of related courses in the area of mathematics, science, communications and liberal subjects. These courses, together with technical courses and field experiences related to a cluster of occupations within a technical field, prepare students for entry level positions in a variety of technical occupations.

Special Administrative Arrangements

The broad offerings available at Rhode Island Junior College have been made possible by special administrative arrangements between the Board of Trustees of State Colleges and the Rhode Island State Board of Education. The Board of Trustees of State Colleges is the agency governing all collegiate level institutions in the state. The State Board of Education is responsible for elementary and secondary education. These separate Boards have entered into contract to plan, construct and operate facilities for the junior college and a post-secondary technical institute for the State of Rhode Island. As a result of this cooperative effort, the opportunity exists to provide high quality comprehensive education at the lowest possible cost. Available funds and resources are being used to the maximum, while duplication of facilities and teaching staff have been minimized.



Perkins & Will Partnership, Architects
Harkness & Geddes; Robinson, Green & Beretta, Assoc. Architects

Under this special arrangement, the Board of Trustees determines all programs carrying collegiate credit and supplies the funds for the general operational budget for all college level programs. The State Board of Education determines and makes available funds for all vocational-technical programs. The Board of Trustees and the Board of Education have pledged themselves to a continued joint program of cooperation to insure the successful realization of their mutual objectives, including the recommendation of such legislation as may prove necessary or desirable. The Board of Education has contributed $3 million of the estimated construction and related development costs for the "megastructure."

Students may pursue two years of college level courses culminating in associate degrees. These may be transfer programs in the areas of liberal arts, business administration or engineering, leading to the associate degree in arts or science. They may be career-oriented programs leading to an associate degree in technology or nursing. Students may undertake career-oriented programs of two-year duration or less which award diplomas or certificates, respectively. The diploma and certificate programs are offered by the technical institute, which is funded by the State Board of Education.

The Curricula

The curricula offered represent an innovative approach in both the academic and vocational areas. Career-oriented programs are presented in a college atmosphere in which the maturity, preparation and attitude of the students as well as as the nature of the educational experiences are directed toward the educational objective: preparing students to qualify for employment in current and reasonably predictable future employment opportunities.

A curriculum has been devised which provides flexibility and enables a student to pursue those courses which support his goals. Diploma students take selected collegiate level courses which support the objectives of their particular programs. Technical students are integrated into classrooms with students enrolled in transfer and associate degree-granting programs.

A student's goal and potential may change during his stay at the junior college. The flexible curriculum provides the opportunity for him to adjust his goals and, at the appropriate time, to select a program commensurate with his potential.

The innovative Rhode Island Junior College approach is perhaps typified by the architectural design of the "megastructure" itself, which will be completed by 1971. Dominating the college's new 205 acre campus, the structure will contain classrooms, complete laboratories, faculty offices, counseling spaces, student union facilities, a bookstore and a large enclosed commons area. It will also include a library resource center, closed circuit television studios, and a 1,200-seat theater-in-the-round that will convert into four 300-seat lecture halls.

MARVIN FELDMAN

The Manpower Mission of the Public Schools

Excerpts from a talk given by Marvin Feldman, program officer of the Ford Foundation, at the Conference on Curriculum and Teaching in Depressed Areas, Columbia University, in June 1967. Mr. Feldman argued that the schools must be assigned the responsibility of providing career preparation, particularly for those students whose needs have not been met in academic preparatory programs.

We can no longer tolerate an educational system, particularly in our urban ghettos, that in large part ignores the work world, where occupational studies are provided only for the rejects of the general system, and where vocational students do not receive relevant academic instruction.

Priorities for Action

The first task is to clarify the role of each strand in the out-of-school web of agencies and institutions working in manpower:

—The role of the city, the state, and the national government is to promote fiscal policies, employment practices, and living, working, and learning conditions that foster employment and an environment that enables people to participate in economic life.

—Economic opportunity programs should be responsible for such stimulants as small business loans and shopping centers, cooperatives, savings and loan associations, banks, insurance companies, and other financial institutions in which the low-income, particularly nonwhite, population participates as owners and managers as well as customers.

—Labor Department manpower development programs really concentrate on advancing or transferring (in cooperation with industry) the skills of workers *already employed*. That is distinct from continuing adult education provided by public education.

—The main responsibility for preparing urban youth for initial experiences in productive, open-ended employment should, then, lie with public education. Title III of the Elementary and Secondary Education Act points in this direction through the merger of the area vocational school with the supplementary centers to be funded by the Act. Under a new system, not only will the content of the curriculum be improved, but the cause of racial integration will be assisted. If the vocational school and supplementary centers were combined, they could serve as science and technical laboratory centers for a number of feeder elementary and middle schools.

Content is one indispensable element to more relevant education. Another essential is the continuing assessment and analysis of individual progress and potential to make certain that a student is being given the means of pursuing a particular vocational interest goal without being foreclosed from other goals that may emerge as he develops. Additional resources such as computers for rapid data acquisition and analysis would be required. A *continuous* inventory of the student's skills and learning rate—not an annual or semi-annual review—implies, of course, a continuous response in content and teaching to changes in the student. This, in turn, clearly requires changes in the prevailing mode and organization of teaching.

If they were given the manpower development mission, the public schools could not rely too heavily on a single technique—such as the classroom lecture—but would have to be able to use a combination of media and processes. This would require teaching teams with multidiscipline backgrounds; technical personnel from the vocational system; teaching machines and sequenced material; video tapes and technical laboratories; community motivation programs; on-the-job training stations and continuous daily guidance and counseling services. A truly comprehensive school would be one that orchestrates the best learning processes of an academic high school and a vocational high school for the entire student body based on individual programming.

Separation of the manpower mission from public education has also denied vocational education the kind of support from universities and other resource centers that other aspects of public education have begun to enjoy in the last few years.

Following are some other paths that the acquisition of a manpower mission and resources would open to public education:

—A wide variety of exploratory occupational education programs could be introduced in the junior high schools. Such programs might well replace more limited current industrial arts and home-economics subjects which are offered to most children in junior high school.

—Within existing, separate, area vocational schools we could introduce a core of skills which are related to a cluster of occupations rather than to one specialized occupation (for example, the graphic arts—embracing printing, drafting, photography, and other subjects—instead of printing *per se*).

U. S. Employment Service placement officers could be placed in existing comprehensive high schools, vocational schools, technical institutes, and community colleges, so that the public schools take on the serious role of job placement rather than job referral. The legislative restriction requiring a youngster to be sixteen years old before he is eligible to use the guidance capability of the Employment Service needs to be changed. Tying U.S.E.S. to public education also would provide vocational counseling services to many schools that now lack them altogether.

—Counseling that is informed by first-hand knowledge of education and the work world would also improve the effectiveness of cooperative programs that combine work experience with secondary school and junior college programs.

Differentials in Unemployment Rates in 1966

National Average	**3.8%**
Men in professional and technical fields	1.0
Married men	1.9
All whites	3.3
All nonwhites	7.3
Men in unskilled occupations	7.3
18 and 19 year old boys	10.2
18 and 19 year old girls	12.6
16 and 17 year old boys	13.7
16 and 17 year old girls	16.6
Nonwhite 18 and 19 year old boys	20.5
Nonwhite 16 and 17 year old boys	22.5
Nonwhite 18 and 19 year old boys	29.2
Nonwhite 16 and 17 year old girls	34.8

Source: *Handbook of Labor Statistics*, 1967, reprinted in *The Emerging Labor Force*, Chamber of Commerce of the U. S.

Achieving the Goal

The first logical step toward a relevant system in which the manpower mission is intrinsic to public education at all levels would be to link large federal vocational-education resources and urban education by tying programs supported by the 1963 Vocational Educational Act with the Elementary and Secondary Education legislation.

The federal government is currently investing great sums of money for improved education, manpower, and training programs. There are now over 150 different federal aid programs financed by over 300 separate appropriations and administered by twenty-one federal departments and agencies. But the ties to both education and employment are fragile; adult community action and literacy programs are given in a vacuum, and community manpower programs are remedial, compensatory at best, and uncertainly linked to employment.

Under an arrangement in which all pre-employment and pre-college programs would be the responsibility of public education, non-school programs to promote continued vocational growth and advancement would depend on two approaches:

One, cooperative education programs would provide a vehicle for advancement after employment.

Two, registered apprenticeship programs for trade union opportunities would become the total responsibility of the Department of Labor rather than of public education. This means official recognition that training for specific trades is a joint industry-labor responsibility based on apprenticeships. School programs now do not guarantee deprived minority youngsters entry into union apprenticeship programs.

Instead of serving industry with training for trades that is based on the availability of teachers, the schools would serve the student by improving the educational process. Secondary-school graduates unable to enter the trade unions would then be able and well prepared for post-secondary occupation education for technologies and middle management opportunities.

Despite their failures, the schools have scored enormous gains in the past—in meeting the needs of a frontier society, of an immigrant society, and of a space-age society. They can do it again, if the assignment is not withheld from them. Let us therefore give public education the mandate—the challenge—of preparing our youth to seize and use the opportunities that are the end toward which other struggles are but means.

PHILIP E. LERMAN

Is Vocational Education for the Poor?

Mr. Lerman is Vice Chairman of the Wisconsin State Board of Vocational, Technical and Adult Education and is treasurer of the Lerman Tire Company in Milwaukee.

Vocational schools, one of the traditional methods by which immigrants worked their way out of the ghetto, have failed to attract and hold nonwhite youth in today's troubled inner cities. It could be said that present-day vocational-technical schools are doing a poorer job for these youth than are the private and public universities. I believe that a study of enrollments would show that fewer Negro youth who successfully complete high school seek out post-secondary vocational schools for career choice than any other form of higher education.

Technical schools whose graduates have such easy access to the employment market (in Wisconsin there are often from five to nine job offers for every associate degree graduate) have done little to attract core area youth or have little success in retaining those they do recruit. Some of the blame can be laid to the secondary school system, from which inner city graduates are not adequately prepared to assume the work level necessary for matriculation in spite of the lower entrance requirements. Many high school guidance counselors do not encourage black youth to enroll in technical schools, nor do they seem willing to send "brighter kids" to the vocational schools. Of equal concern is the lack of visible success for core area students in identifying with successful models in the world of work. Another factor is the failure of the schools themselves to provide staff who understand and are sympathetic to the problems of the present day ghetto resident.

Vocational Education Defined

According to the State Board of Vocational, Technical, and Adult Education, which supervises the Wisconsin system in cooperation with either area-wide or municipal district boards, vocational education takes place at the post-high school and adult levels. The terms vocational and technical education generally refer to education leading directly to employment as differentiated from general education which has no specific employment objectives.

Vocational schools were established in Wisconsin more than 50 years ago. First called "industrial" and later "continuation" schools, in 1911 they began to provide full and part-time job training and general education opportunities for the thousands of employed young people who had dropped out of school, for trade apprentices who were finding it increasingly difficult to receive on-the-job training, for young adults who lacked the necessary skill to find and keep long-term employment, and for employed adults who, even in those days, found it necessary to learn new skills to meet changing job requirements.

Vocational schools today enroll people from essentially these same groups. More and more, our vocational schools, in order to meet the pressure from below, have expanded their full-time programs into the new technologies and have placed increased emphasis on the one and two-year full-time post-high school education programs. This emphasis on post-high school education is a consequence of the tremendous change in scientific and technological advances, as well as the shift from a rural to an urban society.

More recently, courses patterned after vocational programs have been offered at the secondary level. In some cases they lead to positions in the labor force. In Wisconsin, most new high schools built since World War II have included shops and laboratories for the teaching of industrial arts, which are actually pre-vocational courses. With the exception of Milwaukee, no vocational school in the state has courses for the youth of compulsory school age. The secondary school systems have recognized that they have the major responsibility for the education of compulsory age youth and, with the aid of federal and state funds, are developing programs for the non-college bound student at the high school level.

Inadequate Preparation in the Ghetto for Vocational Schools

Unfortunately, the level of education in the ghetto is well below the norm of the community, and no core area high school can approach the level of what is referred to as a "comprehensive" high school. The tragedy of poor schooling is further compounded by a rigid traditional curriculum in which there is little attempt at presenting pre-vocational subjects so that students will be encouraged to seek technical education beyond the high school. In communities where vocational high schools do exist, too often the curriculum and equipment are outdated and students prepared only for obsolescent job opportunities. It must be reiterated that there has been little or nothing done to attract ghetto students to vocational schools—and certainly no encouragement by vocational schools in seeking core area students.

In Wisconsin, with the exception of Manpower Development Training Act (MDTA), On the Job Training (OJT), and related government funded programs, there is a very small number of Negroes, Mexicans and Puerto Ricans enrolled in regular classes in vocational schools. This is generally true throughout the country. It is tragic that one of the basic institutions that served to "Americanize" our parents and grandparents has failed to assist in the urbanization process of our own indigenous in-migrant group and further has failed in opening the "golden door" into the world of work opportunity.

An examination of the various levels of services offered by the vocational-technical schools indicates the paucity of service rendered to the core area resident. What is true for post-high school education opportunities is also true, though to a lesser extent, of the other levels of services. Core area residents can be found in MDTA classes and to some extent in Adult Basic Education classes. In the latter instance, when these classes are tied to a specific "earn while you learn" project funded by a local welfare department, a state employment service, or a local industry, the student will respond and sometimes be encouraged upon completion of a specific program to continue his education for his own benefit. Too often, though, students are not encouraged by the administration or by an insensitive teacher to seek further educational opportunities. Sometimes the gigantic nature of the physical plant itself makes the student, usually past school age, uncomfortable. He is lost in the jungle of corridors, forms and class records. Vocational services at this level can be successful, providing the staff is sensitive to the needs of the students not only in providing them with the tools of a specific trade or job but also with a sense of purpose and dignity.

One wonders why an Adult Basic Education class can be a dud at the Big House (the vocational school) and be such a success in a store-front church or in a made-over theatre run by Opportunities Industrialization Center (OIC) or an El Centro Hispano. Why can a program succeed on plant premises and not attract half the people when given in a school? There must be an answer in the manner in which ghetto residents look at schools and also at the sincerity of the process.

Proposals for Improvement

The vocational-technical system can and must be one of the principle vehicles for emancipation from the ghetto. Schools should establish service centers in core areas and staff them with individuals who are sensitive to the peculiar needs and problems of the residents. If located in a Spanish-speaking area, a Spanish-speaking staff member should be available. Centers should be available to the residents at their convenience. The centers could also serve as classrooms for Basic Adult Education, recruiting stations for MDTA and related programs and for regular programs offered at the main school. The center could offer demonstration projects from time to time, showing the programs available at the main school and coupled with job interview sessions, to demonstrate the sincerity with which the institution and the community approach the problems of the core area.

The center could also serve as a means by which the core area resident could speak to the institution. Industry, labor and the public are usually represented on vocational school policy-making boards, but the poor, and particularly the core residents, have no opportunity to be heard. Here they could speak directly to the representative of the institution and could help in making the kind of changes which would make the vocational-technical school more meaningful in relation to their needs.

Vocational-technical school staff should engage in active recruiting of the core area high school student, encouraging him to attend the vocational schools. Teams of recruiters should include representatives of industry and commerce, who could point out the benefits of this type of education "from the horse's mouth." Wherever possible they should be members of the core area. Young people as well as their elders need success images. A more careful selective process should be utilized in employing personnel who come in contact with core area residents. Teachers and administrative personnel working in core area centers should be carefully screened and, if necessary, should be given special training so that they can better understand the problems and attitudes of the ghetto client.

Wherever possible, the vocational schools should work closely with all the private and public agencies in training and upgrading programs. Indigenous self-help education and training groups, like OIC, El Centro (in Milwaukee), and the Urban League should be encouraged to expand their programs. In the process, their help could be sought to identify potential full-time students who would benefit from further education. Schools in local areas should be encouraged to work with the employment service or welfare department to develop short-term programs to prepare people for employment. Local industry should be encouraged to develop its own basic education programs. Students graduating from these in-plant programs should be encouraged to continue their education at the vocational school. Management should subsidize their further education. Vocational schools should be challenged to provide extension service to large industries for their own training programs.

State and Federal Efforts

On the state and federal level, programs should be developed to promote vocational education. All public agencies involved in core area endeavors should be made aware of the many services available from the vocational-technical school. State funds disbursed by state vocational or community college boards should be channeled into the core area. Apprenticeship programs should be made available to ghetto residents on a non-segregated basis. Where it can be proven that existing programs practice segregation, immediate steps should be taken to cut off all state and federal aid until reforms are made. If necessary, the state, through whatever mechanism it possesses, must create a structure in apprenticeship training that discourages segregation.

State legislation should be passed offering the same type of financial aid to vocational school enrollees as is now available to college students, with the proviso that a more liberal stipend should be offered to ghetto residents to more realistically meet their needs. Stipends should include some type of family allowance, so that potential students could afford the education they need while at the same time discharging their family obligations. The investment would be returned to the state by the increased purchasing power as well as taxpaying ability of the more skilled and marketable individuals.

On the federal level, the tax power should be used to encourage industry to participate more fully in the education process. Wherever possible, industry should run its own programs consistent with its own needs. Where plants or businesses are too small to go it alone, they might be encouraged to initiate joint projects which could be subsidized by the federal government. The subsidies could take the form of tax credits, direct grants-in-aid to individual students, or a write-off for training costs, providing there could be control for efficiency and results.

Funds allocated to the states under the Vocational Education Act of 1963 should be earmarked so that those states developing programs promoting vocational education opportunities for their ghetto areas would be allocated an additional sum of money based on the percentage of people served. Adult Basic Education funds should be disbursed in the same manner.

Jobs are the key to any successful vocational-technical education program. Without the private sector's cooperation and commitment, little can be accomplished. Industry should not only be assisted in establishing basic education programs within their plants; they should also be encouraged to undertake more on-the-job training. Trade associations, manufacturers associations, chambers of commerce and labor organizations must be committed to promoting education within the ghetto and to providing the incentive through which ghetto residents can see the reward available as the process proceeds.

Unless the schools and their governing bodies are willing to take steps to make schools more effective instruments for transforming the ghetto, they are not fulfilling the purposes for which they were originally created. All segments of the community, the federal government, the state, the local governments and the private sector must share in this change or bear the burden of the failures.

Pennsylvania Scheme Offers New Hope for Slum Dwellers

James J. Kilpatrick

It is too early to do much crowing about Pennsylvania's "Neighborhood Assistance Act," for the law has been in effect for less than five months, but two good reasons suggest that it deserves an encouraging word.

First, this modest piece of legislation seeks to bring the skills of business directly to the problems of the slums. Second, it provides one more example of the continued vitality of the states in our federal scheme of government.

The Pennsylvania law is largely the brainchild of a freshman Republican legislator, Daniel Beren of Abington. He learned last year of the job being done in the Spring Garden neighborhood of Philadelphia by Smith, Kline & French, the drug manufacturers. He took a look at their program, and thought he saw not the answer, but one answer, to the complex problems of neighborhood improvement and Negro advancement.

The SKF people have their main plant in a part of Philadelphia that is typical of countless such districts across the nation. It was once a fine neighborhood of large homes, meant for large families. Then families grew smaller and the march to the suburbs began. A slum was on its way.

Two years ago Smith, Kline & French quietly launched a three-part program to serve the people of Spring Garden. One part was a job-training program, similar to other such programs elsewhere. Of greater interest is an "Information Services Center," which the company set up in the basement of an unused church. The third part goes to the rehabilitation of housing.

Today the Center has a full-time staff of four persons whose job is to cut through red tape and to help the neighborhood residents find the help available to them. Many of the Spanish-speaking members of the community are wholly unable to cope with forms, rules and regulations. Others are afraid of the bureaucratic presence and generally apprehensive of anything that smacks of officialdom. By keeping the program low-keyed and unpretentious, the Center has managed to win a solid place in the community. Some 300 persons a month are coming in for help.

The company's role in housing rehabilitation is equally as inconspicious. The old houses of the neighborhood were basically too sound to be destroyed. Too large for single families, they appeared to offer fine opportunities for conversion into decent flats and apartments. So SKF helped to find a developer who would contract with the Philadelphia Public Housing Authority for house-by-house modernization. The company pledged to underwrite a part of the interest costs. Now 60 to 70 houses have been done over, to provide 200 renovated housing units. The neighborhood is coming back.

Beren was so impressed by the SKF achievement that he won approval in November of his Neighborhood Assistance Act. The law is short and simple. It provides a credit against corporation income tax of up to 50 per cent of the first $150,000 invested by a business firm in state-approved programs of benefit to persons living in impoverished areas. So many business firms have indicated an interest in participation at a higher level that Beren already has introduced an amendment to raise the maximum credit to $175,000.

These things can't be hurried. Big business, like big government, sometimes moves with less than lightning speed. But the Pennsylvania law appears to offer the incentive, the opportunity, and the room to turn around in that business leaders have been urging. Beren's act permits wide latitude in neighborhood programs. It invites the very skills that business is supposed to possess — imagination, enterprise, know-how, cost-cutting; and it says to business: Get going.

Perhaps other states have preceded Pennsylvania in the tax-credit approach to neighborhood improvement. If so, more power to them. For business leaders, the plan offers a fresh challenge; for slum dwellers, it offers fresh hope.

(C) 1968, Washington Star Syndicate

Occupation	**Job Vacancies in Phila. Metro Area**	**Slum Unemployed**
Total	**100%**	**100%**
White collar	38	15
Skilled craftsmen	22	3
Semi-skilled operatives	21	11
Unskilled laborers	6	26
Service	13	23
Never worked	—	22

Source: *The Emerging Labor Force*, Chamber of Commerce of the U. S.

JOHN A. VOLPE

The Urban Education Context

Governor Volpe is serving his third term as Governor of Massachusetts. He is also Chairman of the National Governors' Conference and President of the Council of State Governments. During his term of office Governor Volpe has sponsored and secured enactment of a limited sales tax program to finance elementary and secondary education as well as legislation to curb de facto *segregation in public schools. The Governor's statement indicates that the problems of vocational-technical education must be viewed within the context of the entire urban school crisis.*

The exodus of the middle class to the suburbs, the migration of millions of rural poor from the country, and the growth of urban ghettos have transformed our major cities. The greatest problem with which American education is confronted today is the vast discrepancy between the educational opportunity available to the suburban child and that which is available to his central-city counterpart. The child in the urban school system appears to be trapped in a cycle of despair, where one generation of disadvantaged gives rise to another, while the well-to-do, who have fled from the city, maintain their high standards in a world apart.

How can a governor respond to this problem? What is the role of the state in educational problems, when school districts jealously guard the principle of local control? An account of our attempts to improve urban education in Massachusetts, one of the most urban of states, should be instructive, for we have made great strides in this challenging area.

Legislative Revitalization of State School System

As the decade of the 1960's began, Massachusetts faced an increasingly serious need to bring coordination to our state college system, to increase state aid to our local schools, and to modernize and strengthen greatly our State Department of Education. Our response was a $250,000 comprehensive study of public education in the commonwealth, from the kindergarten to the postgraduate level. This project, begun in 1962 and which came to be known as the Willis-Harrington Study, was the most exhaustive of its kind ever undertaken in Massachusetts.

As a result of this study, legislation was enacted in 1965, making sweeping changes in our education system. The Department of Education was reorganized into five new divisions and, most important, was given greatly increased powers over the local school systems. The revitalization of our department proved to be the critical step which laid the foundation for a continuing effort to end the disparity in the quality of education between our urban and suburban schools.

In our movement toward the enforcement of state standards, we have regularized the length of the school year and school day throughout the commonwealth; we are the first state in the nation to require a phasing-in of kindergartens (by 1973). We have begun to establish lower pupil-teacher ratios in public schools. Additional standards will follow in such areas as school buildings, libraries, guidance services, psychological counselling, physical education facilities, and testing. Soon no city will have the option of operating inferior schools. Meanwhile, we are gradually strengthening the staff of our Department of Education so that it will be sufficient in number and quality to assist communities which do not have adequate resources.

A key feature of this revitalization has been the establishment of a Bureau of Curriculum Innovation for the purpose of revising methods and subjects of instruction in order to keep abreast of the fast-moving developments in our complex modern society.

Equally significant in showing our awareness of the need to innovate is legislation enacted last year providing for the establishment of up to three experimental state schools or school systems, under the aegis of a board appointed by the Commissioner of Education. One of these schools will probably be situated in the Boston metropolitan area. Present plans call for the experimental Boston concept to have several sites, in both inner-city and suburban locations. The children, drawn from the entire metropolitan area, would move through the various locations of the school learning about the variety of communities in which they are situated. This multi-sited school system will have its policies determined by the parents of the children involved. Thus, the first state experimental school will experiment with curricula and community involvement of all sorts. In addition, it is certain to be an unusually stimulating teacher-training institution.

Where Are the Funds?

All of these improvements, like the enforcement of standards, cost more money, which we can only obtain by resorting to new sources of revenue. The advancement of public education at the local level in Massachusetts was demonstrably hindered by an overwhelming dependence on local property taxation as the source of funds for education. Yet local property taxes had reached the breaking point in many communities. In 1966, a limited sales tax to provide funds for local elementary and secondary education was enacted. With that tax program, we obtained a revised state aid formula that abandoned the old foundation program of state aid and substituted an equalizing, sliding-scale formula based on need.

The definition of "need" is critical, because our new formula for the distribution of state educational aid does not simply take into consideration the number of children which a community must educate but also the financial ability of that community to educate those children, based on its own tax resources. The key factor in determining the percentage of local educational expenses for which the state will provide reimbursement is the taxable property valuation per school child in the particular community. Those communities which have the lowest taxable valuation per school child (i.e., which are least able to meet the burden of local educational costs) receive the highest percentage of reimbursement from the state. Those communities which have the highest taxable valuation per school child, and are consequently best able to meet local educational expenses, receive the lowest percentage of reimbursement.

We believe that this distribution formula is the cornerstone of our effort to equalize educational opportunity throughout our state and particularly between urban and suburban schools. For the first time, we can truly say that we are directing our greatest resources to those areas which have the greatest problems. The state is literally taking money from the affluent and channeling it into the education of the disadvantaged.

The Racial Aspect

No discussion of the disparity in educational opportunity between urban and suburban school systems would be complete without an in-depth look at the problem of *de facto* segregation. Indeed, in many cities the latter term and the urban-suburban disparity are synonymous. In 1965, the Massachusetts Legislature enacted the first state law to curtail *de facto* segregation in the public schools. This statute defined a racially imbalanced public school as one attended by 50 per cent or more non-whites. Local school committees which failed to alleviate racial imbalance could lose state educational assistance funds. Conversely, the law authorized additional funds for those school committees taking positive steps to alleviate imbalance.

In 1964, there were 55 racially imbalanced schools in the commonwealth—45 of them in the city of Boston alone, 8 in the city of Springfield. Massachusetts has recognized that a solution to the problem of racial imbalance cannot be found within the central city alone. Suburban communities in metropolitan Boston are participating voluntarily in a program known as METCO, under which non-white children are bused from imbalanced central-city schools to the suburbs. State appropriations support this program.

Alliance for Reform: Post-Secondary Vocational Opportunity

This outpouring of support for change augurs well for the improvement of urban education in the commonwealth. Our great private universities and colleges, groups of citizens and leaders of the under-privileged have begun to form alliances for reform. Community schools like those being planned in Boston and Springfield, self-help education programs, and grassroots pressure groups are the products of new "urban coalitions." They spell great hope for major educational reform in our urban areas. From such new coalitions will flow the ideas and initiative that will radically change the education of the disadvantaged urban citizen.

Finally, we have recognized that a comprehensive approach to the problems of urban education involves more than just higher standards, innovation, and increased financial support for elementary and secondary education. Consequently, we have also begun a reorientation of our public higher education system. In this reorientation, two elements stand out: the opening of a Boston campus of our state university and the dramatic growth of our state-supported community college system.

The University of Massachusetts opened a branch in temporary quarters in the heart of the Commonwealth's largest urban area, Boston, in 1965. Next fall it will enroll 3,400 students. Until the University opened the doors of the Boston branch, our largest metropolitan area, encompassing over 2.5 million people, was not served by any public university-level institution. As soon as a suitable permanent site can be selected and developed, the Boston branch will enroll many more thousands of students.

The University of Massachusetts at Boston will serve an urban population, offering courses and programs which are relevant to urban problems. In the words of Chancellor John W. Ryan at the first faculty and student convocation:

"In creating a university in the great western tradition we must make it public and urban in all that these words imply . . . in making it public, we will bring the Morrill Land-Grant Act up to date. A public university must offer education to students who cannot for economic and social reasons ordinarily go beyond high school. . .

"Nor is this all. Despite the avalanche of numbers expected in the coming years, this new university will not be satisfied with accepting only those students who apply on their own initiative. We will seek out, and help support, those young people whose race, or recent immigration, or depressed economic status, denies them higher education and even the expectation of it. We will seek to improve education for all, from pre-schoolers to adults."

A university-level education, however, is obviously not the answer for a substantial percentage of our urban population. It is here that our developing community college system plays such a vital role, with its more vocationally-oriented curriculum. Starting from nothing in 1960, we now have twelve operating community colleges, all entirely state-supported, with a total enrollment of over 11,000. Six more such facilities are planned. Those in existence are situated not only in our larger urban centers, such as Boston, Worcester, and Springfield, but also in our smaller industrial cities, such as Fall River, Brockton, Haverhill, and Pittsfield, communities which lacked public higher educational institutions and whose economies reflected their absence. The overall growth in enrollments at public institutions of higher education in Massachusetts has been dramatic. By the forthcoming autumn, the total enrollment in all such public institutions will have doubled—from little more than 30,000 to approximately 60,000—in a four-year period. The rapid development of our urban-oriented community college system has been the chief contributing factor in this impressive increase. Despite the low tuition at all our state higher educational institutions, we have continued to propose more funds for scholarships for those in need of financial assistance, in accord with our belief that no qualified student should be denied the opportunity for a higher education because of lack of funds.

There are no panaceas for the problems of urban education. Any attack on these problems must be comprehensive, unified, and integrated, involving changes in governmental structure, a realistic approach to the problem of financing education, thorough planning, legislative action where necessary, concern with education at all levels, and a willingness to innovate and to admit that existing ways of doing things are often inadequate in meeting contemporary needs.

But underlying all these there must be a commitment to understand and to resolve the problem. Where this commitment exists—deep-rooted, determined, and unshakeable—all the rest will follow.

The Art of Fishing in Alaska

Programs designed to provide instruction in the art of fishing are not likely to be priority items in many school budgets, but the way the fishery program is being conducted by Hoonah, Alaska, High School, it may have application for other schools and other programs.

Hoonah High School is conducting a team teaching effort in its fisheries program in which 12 junior and senior high school boys are enrolled. Members of the "team" include the Coast Guard Auxiliary, which has conducted classes in navigation and shrimp fishing, and the Department of Fish and Wildlife, offering courses in scientific commercial fishing. Other experts have discussed preservation of fish, types of commercial fishing gear, and species identification. Only one permanent member of the high school faculty is assigned to the program. He is David Safford, coordinator and head of the team.

The program will be commended to President Johnson by the U. S. Office of Education as an exemplary program funded under the Vocational Education Act of 1963.

ECS COMMISSIONERS SPEAK OUT:

State Priorities for Voc-Tech Education

GOVERNOR ROBERT E. McNAIR of South Carolina stresses the importance of vocational-technical training and discusses the efforts which South Carolina is undertaking in this field.

For too long leaders at all levels of government have been passing the problem of the ghetto off as a necessary and incurable by-product of our free enterprise system. But the national conscience can no longer condone the blight of poverty or fail to respond to the call for unified and immediate steps to erase this scar.

In South Carolina, dedicated efforts to stem the tide of the rural migration to the cities, innovative and successful programs of occupational training, and renewed emphasis on placing industry in rural areas are showing rich returns.

We are now devoting a large share of our efforts to the training of our under-prepared adults and those young people who plan to work after high school instead of going on to college. Believing that occupational training holds the key to making productive citizens of people with low or no skills, we are engaged in a broad program of technical education at the post-high school level that is the envy of many states and our vocational training program at the high school level holds bright promise.

South Carolina's Technical Education program was created by following these general principles:

1. Technical education should supplement not replace emphasis in basic education.
2. The program should be statewide.
3. It should be highly responsive to change and flexible enough to meet a wide range of needs.

At the elementary and secondary school levels in South Carolina more than 400,000 students plus the drop-outs make up the 80 per cent of the young people who will not go on to college. These young people represent either the hope or the burden of the future, depending upon the state's response to their occupational training requirements.

Already, eight area vocational schools are in operation in South Carolina. A broad construction program has been launched with a goal of 51 schools to be built during the next five years.

The blending of the technical and vocational programs, with additional efforts at the basic education level, is serving to pull our state into the mainstream of America. Though we have far to go, we are on the way. Knowing that our people are the chief beneficiaries of these efforts, we are constantly evaluating and streamlining the various programs. Our goal is to achieve dignity and prosperity for all our citizens.

Our objective in South Carolina is employment for all, and as we move toward it we can at the same time bring about great social change and stabilize our course for the future. By providing a balanced program of vocational and technical education to all adults and young people who want it, we are making a significant contribution to the solution of one of our nation's greatest problems.

KING TELLE, Indiana State Representative, argues that the state legislature should establish a commission for occupational education within the office of the Superintendent of Public Instruction in order to insure the development of an integrated and effective vocational program.

Indiana is at the crossroads of decision with regard to the nature of technical educational opportunities which future generations of Indiana youth will receive.

Indiana educators have long supported the belief that vocational education should be viewed as a total program which is planned, programmed, and coordinated on a continuum from the elementary school years.

The General Assembly must also constantly evaluate what we are doing to see that our emphasis, support and funds are being used wisely and in the best interest of all our citizens, and that vocational education is available to all persons regardless of race, sex, wealth, or place of residence.

Therefore, the legislators must give top priority to creating a commission for vocational-technical-occupational education responsibilities. All vocational-technical education policies, procedures, and funding should be within one office, that of the Superintendent of Public Instruction, and administered through local boards of education.

REVEREND ROBERT WANSTREET, Superintendent of Schools in the Diocese of Wheeling, West Virginia, outlines four priorities for legislative action, including a relaxation of certification and academic restrictions.

Following are four statements, in the order of priority, which I believe state legislatures should establish in promoting vocational-technical education:

A state should:

1. Realize its legal (and moral) obligation to provide educational opportunities beyond the high school for the non-college bound future citizen of the state;
2. Realize that no state's single educational unit should or even could embark on such a program, if the program is to be strong, beneficial, and productive;
3. Realize that where practical by reason of geography, and where feasible by reason of common sociological and/or economic interest and problems, the "political" barrier of county or district lines should be bypassed completely; in short, the thinking should be along area or regional lines;
4. Realize that the problem is practical; the program is practical; and the means are practical; and therefore a practical approach by state certification agencies to secure practical instructors by lessening and/or relaxing academic restriction appears in order.

DR. KENNETH C. MADDEN, Delaware State Superintendent of Public Instruction, stresses the need for permissive legislation and broad financial support to provide comprehensive, statewide vocational opportunities.

Opportunities in vocational-technical education are an integral and vital part of a state's overall educational program and must be adequately provided for through state legislation.

A state legislature in order to promote vocational-technical education should establish priorities of action, including permissive legislative and financial support that will provide broad opportunities for all persons to develop an understanding of occupations and the world of work as a basis for choice and preparation for entry into employment.

Consideration must also be given to unemployed and underemployed out-of-school persons. Educational and training opportunities must be available for them to prepare for entry into employment, to up-grade themselves for advancement in employment and/or retrain for new or changing employment.

Permissive legislation may be required to guarantee that all persons, including those with special needs, regardless of grade or age have an opportunity to participate in vocational-technical educational programs adapted to meet their specific needs, interests, aptitudes, personal characteristics and abilities.

CHARLES R. DeCARLO

Changing Industrial Needs and Job Training

Dr. De Carlo is Director of Automation Research for the International Business Machines Corporation. He has published numerous articles on the application of information systems, management practices and the social and cultural aspects of science and technology. With Dr. Ormsbee Robinson, he has co-authored a book, "Education in Business and Industry."

In our society, it is not unreasonable to have a continuing conflict between that process of training which prepares young people for work and the process of education preparing them to become autonomous human beings. These two are met in the field of vocational education. Implicit in the notion of vocational education are several key assumptions concerning the world of work. These are:

—There exists a set of trades or crafts for which a young person, through a combination of practical work and supporting theoretical subjects, can be prepared.

—Such trades and crafts tend to be stable as occupations over long periods of time. This implies that techniques and machinery associated with the jobs change with relative slowness.

—It is to the student's advantage to make an early career decision in terms of his ultimate occupational choice. In this way, through appropriate training, on the completion of high school he will be prepared to contribute productively to the work process.

—Differences in social and economic backgrounds, intelligence, and aspirations force a split in public education between the college bound and the work bound. This makes inferior or second-class those programs associated with vocational or occupational training.

—Because of the applied nature of the material involved in vocational education classes, teachers must have practical experience, even at the expense of other educational qualifications.

These assumptions, which have led to the development of a separate vocational education program throughout the country, are not only invalid. They represent harmful and dangerous circumstances in the preparation of youngsters for participation in the adult world.

The Realities of Today's Work World

The nature of work, in the world of today and of the future, is changing.

First, the work world, including the processes of production, distribution, finance, and control, is becoming increasingly dominated by cognitive functions rather than muscular skills. Census statistics show the lower skill level job declining as the white-collar jobs increase. The amount of paper work associated with even the smallest of enterprises today dictates the need for a minimum command of communication and reasoning skill on the part of the lowest employee.

The New World is a world of men and machines constituting a new level of energy and productivity. We in America not only have a higher standard of living than the backward nations of the world but, importantly, men here work in environments characterized by man-machine relationships. This is true not only in the large mills and the electronic computing centers but also in the auto mechanic's shop, warehouse, and smaller business enterprise, because jobs which even today require a fair amount of manual work are embedded in an environment of machines, prime movers, control devices, etc. There is need for some general understanding of elementary mechanical devices and the principles of energy conservation and transformation. Arthur Koestler speaks of the "urban barbarians"—those people who make use of the fruits of technology and are completely apathetic to the nature and magic of its processes.

As work becomes increasingly cognitive and related to machines, there is built up a demand for large, efficiently designed systems. By systems design I am referring not only to physical systems, but also to design and control of the large human organizations which are a necessary adjunct in the development and operation of the technological society. Individuals employed in the work world must be engaged in new levels of man-to-man relationships and in the integration of men and machines into "team activities."

If because of the application of technology to work, man is increasingly alienated from the totality of the work process, it becomes vital that he find his meaningful relationship to the work process through participation with others as elements in the larger systems. This requires that he communicate effectively with co-workers and managers on matters ranging from details of the physical operations to such complicated issues as benefits, payroll questions, employment policies, etc. The resultant sense of dependence upon the larger organization for both security and identity has far-reaching effects upon the worker's role as a citizen.

Another consideration in the new relationship between pre-employment training and the work experience is the role the job plays in establishing the individual within the community. In today's world the job environment is becoming increasingly the defining element of stability and identity in the individual's life. Certainly, since the end of the Second World War, the geographical mobility of our population has radically altered the stabilizing value of family ties and the community roots. Every year one American in five changes his residential address, and one person in four now lives in a state other than the one in which he was born. These facts imply the importance of the job as an enduring mechanism for helping establish individual identity. In view of the importance of the job-career decision to individual psychological well-being, it is important that early guidance and career counselling be strengthened.

Another major component of the work experience is the individual's requirement to deal with the organization within which he works. His understanding and responsible participation in the processes and goals of the employer organization, of the union or trade association, of professional and technical groups make demands upon the individual which tend to divide his loyalties. The problem of living with the many divided loyalties, including those to church, family and community, which the individual must handle in the modern world is one of our most crucial problems.

An important characteristic of the work environment is free or leisure time and the possibility of increasing such time through a shorter work week. Today, the free time available far exceeds what might have been prophesied 50 years ago. Instead of being concerned over the mass tastes and activities, the present use of free time should be considered as the base upon which to build a better leisure in the future. This will require that all education be subject to the liberalizing influences of general studies which should actually complement the required job training.

The pressing problems facing America in the position of world leadership require an informed citizenry and make imperative the development of novel and creative national policies. These by definition will tend to be disruptive of old values and practices and can only be successfully implemented with the support of a populace understanding the need for a change.

Resultant Demands on Education

The kind of education required as prerequisite to work, I would suggest, must have the following components:

- —General reading, writing and communication ability equivalent to or better than the current 12th grade level.
- —Arithmetic ability and the elements of logical reasoning, including the ability to understand typical work procedures, preparation of forms, nature of contracts, etc.
- —An understanding of the basic mechanical and doctrinal principles of machines, including motors, generators, combustion engines, linkages, levers, and power transformers.
- —A knowledge of elementary principles of economics, including notions of capital, profits, government debt practices, etc.

But most important must be the commitment, absolute and deep, to the idea of a truly liberalizing education for everyone. Children growing up in the complex and changing technological society have a critical need for an enduring system of values. The conservative traditions of education must assume primacy, to guarantee humaneness in the emergent society and preserve the finest human values which man has distilled from his history. These values, extremely difficult to attain, which include integrity, self-awareness, self-assurance, introspection and conscientiousness, are priceless ingredients of the personality. We must find new ways to teach the dignity of the individual. The educational system must give the child the ability to develop loyalty and appropriate commitment to larger organizational forms, to conform in ritual and practice, to contribute to the needs and success of the group while preserving an interior freedom and integrity.

In attempting this, education faces a series of profound paradoxes. In a technological society, the historical and human values which led to its being and which must be a vital part of its educational process may appear in conflict with the quality of life in the society.

A society which places a premium upon loyalty and conformity to the larger organization must teach its children to hold dear their self integrity and accord dignity of self to others, sometimes at the expense of the immediate needs of the group. It must place highest emphasis upon individuality and freedom of decision in the face of the collective nature of the technical act.

To the extent that a technological society takes on aspects of dehumanization, educational leadership must counter by placing highest priority upon human values.

The Need for New Programs

It becomes clear that the most desirable characteristics from the point of view of the employer will be a background of general education, a willingness to accept continued learning and retraining, the ability to work in team environments, and a willingness to accept change and mobility. New programs must be considered to solve the problems of education and the passage from childhood to full participation in society. Such programs might include:

1) A more rapid development of the junior college and technical institute under public and private sponsorship. This would have the effect of lengthening the education life by two years, and of permitting a more general education base. Such a program will probably eventually be developed as a result of the enormous demand and rising educational expectations of the population. There are now 453 public junior colleges and 280 private junior colleges, with over 1.5 million enrollment. These figures must be drastically increased. A principal problem facing educators in this area is to make "acceptable and fashionable" the degrees granted by such institutes. Another is to develop programs leaving open the possibility of transfer into four-year colleges or professional schools for those who desire to go on.

2) Subsidy, through industry, for the introduction of youngsters into the labor force. Methods to apply the resources of industry, both large and small, to solving this problem should be developed. The success of the G.I. Bill in education, in both raising the educational level of the country and providing for increased growth, could make it a model for such a program. Further, such a program could provide disadvantaged groups with special incentives. It should be possible to mount federal, state and local community programs in concert with industrial firms. Of course, if such programs are developed there will be excesses, as there were in the case of the G.I. Bill. However, they can be controlled, and even their existence is a small price to pay for the benefits accruing from successful subsidy programs.

3) Making available part-time or early retired individuals for teaching in such programs. This will require more flexible and creative programs on the part of state education departments. Here, again, joint activities by state agencies and industrial concerns could be profitably undertaken.

4) The extension of programs similar to those being undertaken by the federal government in concert with private business for the training of youth under the "poverty bill" provisions. Training facilities and competencies of the industrial world can be matched directly to critical training problems. Perhaps by expanding the program to include joint participation of educational communities and of business and industry, a new and enduring instrumentality can be created for solving the problems associated with pre-employment training.

5) Valid work experiences through which high school students might spend as much as three to six weeks in plant, office or store locations. Better appreciation of the work would be developed, particularly if such programs were sponsored by industry and school systems on a positive and enthusiastic basis. Such a program should include participation of the parents, so that they too would get an understanding of the differences and opportunities in the work community in which their children are moving.

Continued conflict between vocational and other kinds of educational administration is a needless waste of time and energies. It is clear that the vocational aspects of a person's career and his educational development must procede in an integrated and healthy fashion. Only through the joint efforts of vocational education leaders and other administrators can the changes which are imperative be brought about.

What Is the Responsibility of Business in Modernizing Education?

Excerpts from a 20 page pamphlet, now available from the Chamber of Commerce of the United States, aimed to encourage businessmen to help meet local educational needs.

New dimensions of responsibility and new concepts of organizing the learning process demand a re-examination of the adequacy of our educational institutions in preparing Americans for our rapidly changing society. If a *Necessary Revolution in American Education* (Francis Keppel, 1966: Harper and Row) is in the making, what responsibilities should the business community share with other community groups in encouraging and guiding it?

According to the *Policy Declarations* of the Chamber of Commerce of the United States,

> "The well established and highly regarded right of every American to the opportunity for a sound basic education *requires our constant attention* to see that such education is, in fact, always available and available to all."

This proclamation of policy for the U. S. Chamber was unanimously endorsed by its voting membership.

The Need for Change

It is clear that our schools need the understanding and help of business, and this means much more than dollar support. Every community needs to involve business leaders in its plans to provide more appropriate opportunities for learning and training through more effective teaching and more efficient organization and administration of schools. Well-rationalized inertia in both business and education continues, however, to deter this conversion of potential business assistance into community action programs for school improvement.

Federally sponsored research and teacher training programs have brought a "modern" version of academic subjects (e.g., modern mathematics and science) into many schools. Yet vocational-technical career goals appropriate to most of the teen-age population have rarely been of major influence in such curriculum development; potential employers—and their job analysts—have seldom been consulted about the content or skill required for successful careers; evaluation processes have not evolved in terms of readiness for useful living. Subject-matter academicians seldom collaborate with vocational teachers, and the false dichotomy between knowledge and the application of knowledge, the "knowers" and the "doers," continues to divide both the courses and the personnel of education.

Businessmen have seldom pressed boards of education, administrators or teachers to expand and improve guidance programs, work-study programs or on-the-job training, and thus build a prestige for functional education comparable to that of college preparatory courses. The rapid rise in the non-college-going school population, especially in larger cities, has magnified the failure to identify occupational aptitudes and abilities and guide students toward career opportunities now going begging.

Schools in which the myth of "going to college" dominates curriculum and guidance programs (and parental thinking) are the breeding grounds for delinquency among the youth who need preparation for the world of work. Business has contributed to this myth by making high school diplomas a prerequisite to jobs requiring little abstract academic knowledge—and by requiring college degrees for technical and supervisory positions, even though only 12 per cent of the present labor force now have such an academic background.

Business Involvement is Essential

Whether the "revolution" in education continues to be directed by a myriad of federal programs or through a resurgence of state and local leadership, or by some combination of the two, the modernization of our schools will need continuous advice and assistance from the business community.

For example:

1) Any realistic inventory or prediction of needed manpower to guide the expansion of vocational-technical education requires widespread business participation.
2) Any realistic follow-up of school graduates or school leavers to discover the quality of their performance in the labor force and in society—and hence, the effectiveness of their school preparation—requires the participation of business.
3) The modernization of school construction to house new processes of teaching and administration depends on the collaboration of that segment of the business community with educational leaders.
4) Likewise, the expanding "learning industry" must be in two-way communication with school and college leaders if educational technology is to be appropriate and effective; and such technology must also be consonant with business' analyses of its own manpower needs.

In general, the climate for necessary changes in education can only develop rationally and rapidly in a community where two-way communication between business and education is well established and continuous.

Whether such business collaboration in modernizing education is pursued directly through leadership in modernizing state and local school systems, or indirectly through contracts with federal agencies instituting programs to change the schools, there can be no doubt that business must accept a major share of the responsibility for the outcome of the educational revolution now in process.

CHARLES H. PERCY

The Private Sector in Vocational Education

Serving his first term in the Senate, Illinois' Senator Percy was previously Chairman of the Board and Chief Executive Officer of Bell and Howell Company. He has been chairman of the Ford Foundation's Fund for Adult Education and the New Illinois Committee, which initiates projects in education, slum housing, community development and job opportunities.

The problem of qualifying the disadvantaged for productive employment has existed for a long time. But with the continuing migration of undereducated minority-group families, primarily Negro, from rural areas to the urban ghettos, it has grown rapidly both in size and intensity. Now we see all too clearly the tragic consequences of our earlier failures. Little will be served, however, by looking back. The immediate challenge is to move decisively to correct the mistakes of the past and to chart a better future.

A distinction must be made between technical-vocational training for the person who already has the background which will allow him to use it and training for the person who first must be exposed to basic educational programs. The history of job-training programs has shown all too clearly that the ability to assimilate, retain and apply basic job skills is low among many urban unemployed persons. As a result, they are not prepared to take advantage of vocational programs which assume basic educational and social skills.

This problem must be solved on two broad fronts. The first is to upgrade and reorient preschool, primary and secondary education so that at each stage the individual is properly motivated, given the opportunity to acquire skills, and prepared to learn the skills. But the second and more immediate problem is the training of those already in the employment market or soon to enter it. This article will focus on the second aspect, with emphasis on the role that the private sector must play and the kind of legislation that can encourage and foster participation of all aspects of our private sector.

It has become increasingly apparent that removal of the economic and social barriers which imprison poor America is too large a task for the federal government alone. The diversity of the problems from region to region and city to city is such that the federal government cannot administratively or financially meet all needs in all places. This is especially true when it comes to creating jobs and preparing people for them. A program which works for the textile industry in the South may have little relevance to the meat packing industry in the Middle West or the aero-space industry on the Pacific Coast. Local and state authorities and the private sector, encouraged and assisted by the federal government, can move more rapidly and more intensively than can the administrators of federal programs who must make the basic decisions from afar.

Some leaders in business and industry long have recognized a private sector responsibility to help solve social and economic problems. Recent events have sharpened this awareness so that the entire business community in America generally now recognizes that it must help solve many of our country's domestic problems. The question is how?

Present Involvement of Private Business

Business and industry involvement in vocational training falls into three basic types.

The oldest of these is the individual firm approach. McDonnell-Douglas in St. Louis, Missouri, runs a training program for men and women who have neither high school diplomas nor special skills. It starts with classroom instruction in basic education but quickly puts the trainees on the production line where they gain actual work experience. The employees are paid during the entire training period.

One of the more dramatic examples of industry initiative was provided by Aero-Jet General in Los Angeles, which moved into Watts with a subsidiary formed specifically to hire the unemployed. The firm bought an abandoned factory, won a contract to manufacture military tents, and hired people without testing for knowledge or skills. Eighty per cent of the original work force of 440 persons had no previous work experience; half had police records. After the initial trial period, absentee and retention rates averaged that of comparable non-ghetto businesses.

The second form of private sector involvement is through cooperative efforts among a number of firms, often working in conjunction with community organizations. The Business Industrial Coordinating Council in Newark, New Jersey, is a non-profit association of business organizations and civil rights groups. The Council operates job recruitment, placement and training programs, with job opportunities offered by the participating firms and companies. Another such effort is being undertaken on Chicago's West Side, with 101 companies participating in cooperation with civic organizations and City Hall. One of the reasons for this coordinated effort was that smaller companies could not afford to undertake job training programs individually but at the same time could not meet their labor needs from the available market.

The third category includes those companies which have undertaken training programs in cooperation with local boards of education or individual schools. Western Electric has been a leader in this field. Beginning in 1962, this firm worked with school administrators in New Jersey on local vocational education programs. In 1963, it set up a pilot "basic technology" course for non-college-bound high school freshmen in Bayonne High School. The concept was extended over the next two years to two other high schools. After last summer's riots in Detroit, Michigan, the Bell Telephone Company "adopted" a primarily Negro high school and provided both equipment and personnel to help teach vocational skills and discourage dropouts. Chrysler Corporation is following up with a similar program in another ghetto school to train students as auto mechanics.

The above, I am pleased to say, represent only a fraction of the efforts that are being made by the private sector. Some take advantage of subsidies under existing federal programs; others are undertaken completely at the expense of individual companies.

Private Training Organizations

Another development which holds promise is the emergence of companies—both profit and non-profit—which have as their only product the training of unemployed and unemployable adults for the job market. One of these is a non-profit organization in Indianapolis, Indiana, called the Board of Fundamental Education. It has demonstrated that it can raise a prospective worker from the equivalent of a 4th to an 8th grade education in 150 hours of on-the-job training at a cost of about $300—less than it costs many companies to recruit and screen an already qualified job applicant. Another firm, MIND Incorporated in Greenwich, Connecticut, does the same job for a profit, and has been extremely successful. It now has contracts with more than 50 companies, including some of the largest in the country. In Chicago, Brunswick Corporation's Community Resources Division operates Project Upgrade in cooperation with the U. S. Department of Labor. Brunswick works with individual firms to teach basic skills that prepare prospective employees for job training programs and, with federal funds, will help underwrite job training programs.

Legislative Proposals

Recent legislation has taken cognizance of such efforts. More and more laws are designed to facilitate and encourage community initiative and private sector involvement.

Formulating legislation that stimulates private sector involvement is not a simple matter. My experience with one bill is illustrative.

In late 1967, I prepared legislation entitled the *Employment Incentive Act*. The objective of this bill was to enable individual firms to provide on-the-job training to employees, with the federal government paying much of the cost. Stated simply, it provided for a subsidy which would cover the difference between the legal minimum wage and the actual economic value of the employee to the firm, with the subsidy progressively diminishing as the employee's productivity increased. While preparing the legislation, I sent out a questionnaire to major firms throughout the country requesting an evaluation of its provisions.

When the replies came in, it was apparent that the bill had missed some important points. First, the larger firms, which were envisioned as significant employers under the program, hire most of their employees above the minimum wage. Thus the incentive in my bill was not sufficient to encourage broad participation. Many firms expressed a disinclination to become involved with the paper work, inspections and possible government control that they feared would follow any federal program. A number of major firms said they already had programs to train the unemployed which they preferred to continue financing alone rather than risk becoming involved with government red tape.

I then asked the advice of over 8,000 small businesses in the state of Illinois. Their suggestions and comments were also enlightening. They indicated that thousands of new jobs would be made available in Illinois alone if the red tape could be eliminated from the program.

The point is that, all too often, legislation which looks good on paper simply is not practical for those who have to put it into operation. And when it is not practical, it obviously will be largely ignored or used for the wrong purposes. I am now working on a revision of the Employment Incentive Act, taking into consideration the comments received from industry. The new bill will be based on easily administered tax incentives and a prevailing wage concept. I hope the Congress will consider incentive legislation of this nature this year.

Other bills which have been introduced are based on the concept that the private sector has the ability—and the responsibility—to deal with the hard-core unemployment problem. One of the most significant is the National Manpower Act of 1968, a comprehensive response to the challenges posed by the report of the National Advisory Commission on Civil Disorders. In addition, Senators and Representatives on both sides of the aisle are giving close and critical attention to Administration-sponsored legislation, seeking ways in which bills can be amended to shift major responsibility for administration of programs to local jurisdictions where private sector involvement can be stimulated and utilized to best advantage.

The Responsibility of the Private Sector

Lest I be accused of attributing too utopian a view to the American business and industrial community, I should emphasize that for many individual firms the establishment of programs to train the disadvantaged makes good economic sense. This, however, leads to a further question —that of the extent to which business and industry will or should be concerned with training programs that do not directly relate to providing qualified employees for their own use. Individual firms cannot be expected to provide training not related to their own employment needs. It is in this area that City Hall and community organizations must take the lead, providing the stimulus and funds that will involve business in cooperative training programs. Such programs are of vital importance in providing qualified employees for business which have neither the financial resources nor the personnel to join in training programs.

A discussion of the private sector should not be limited to commercial and industrial profit-making organizations. One of the most significant sources of private sector stimulus to all of these programs can come from the labor unions. Labor can make a significant additional contribution by re-examining its precepts for acceptance of individuals into membership, particularly in the field of apprentice training. Labor has a responsibility to devise programs of pre-apprenticeship training in the same way that industry must provide basic educational training.

The tasks of providing training to qualify people for jobs, and then creating the jobs for the people trained, are inseparable. Thus it is both good sense and good business for the job suppliers to provide the job training. Many are doing this now, but they cannot overcome our present urban job problems alone any more than the problems can be solved by government alone. The final solution to the problems of the unemployed and underemployed can only come through a creative partnership between the private sector and local and state government. If this partnership is then promoted by federal legislation, without imposing controls which will stifle initiative and imagination, rapid solutions can and will be found.

Employment by Major Occupation Group, 1964, and Projected Requirements, 1975[1]

Major occupation group	1964 Number (in millions)	1964 Per-cent	1975 Number (in millions)	1975 Per-cent	Percent change 1964-75
Total employment	70.4	100.0	88.7	100.0	26
White-collar workers	31.1	44.2	42.8	48.3	38
Professional, technical and kindred workers	8.6	12.2	13.2	14.9	54
Managers, officials, and proprietors, except farm	7.5	10.6	9.2	10.4	23
Clerical and kindred workers	10.7	15.2	14.6	16.5	37
Sales workers	4.5	6.3	5.8	6.5	30
Blue-collar workers	25.5	36.3	29.9	33.7	17
Craftsmen, foremen, and kindred workers	9.0	12.8	11.4	12.8	27
Operatives and kindred workers	12.9	18.4	14.8	16.7	15
Laborers, except farm and mine	3.6	5.2	3.7	4.2	[2]
Service workers	9.3	13.2	12.5	14.1	35
Farmers and farm managers, laborers, and foremen	4.4	6.3	3.5	3.9	−21

[1] Projections assume a national unemployment rate of 3 per cent in 1975.

[2] Less than 3 per cent.

NOTE: Because of rounding, sums of individual items may not equal totals.

Source: U. S. Department of Labor, Bureau of Labor Statistics, *America's Industrial and Occupational Manpower Requirements, 1964-75.*

Total Expenditures For Vocational-Technical Education By Source Of Funds And By State
Fiscal Year 1965

State	Grand Total	Federal[1]	State and Local		
			Total	State	Local
Total	$604,645,727[2]	$156,936,015	$447,709,712	$186,734,833	$260,974,879
Alabama	14,449,856	3,312,723	11,137,133	5,943,867	5,193,266
Alaska	340,183	120,592	219,591	137,563	82,028
Arizona	3,697,388	1,139,979	2,557,409	804,517	1,752,892
Arkansas	6,176,080	1,652,783	4,523,297	1,498,545	3,024,752
California	53,863,310	11,221,985	42,641,325	796,111	41,845,214
Colorado	4,556,808	1,433,839	3,122,969	415,624	2,707,345
Connecticut	8,080,351	1,783,460	6,296,891	5,771,115	525,776
Delaware	1,810,746	418,974	1,391,772	1,191,357	200,415
Florida	17,814,618	3,671,686	14,142,932	8,491,178	5,651,754
Georgia	17,061,420	4,618,639	12,442,781	4,490,614	7,952,167
Hawaii	2,080,926	652,495	1,428,431	1,428,431	0
Idaho	2,390,197	878,270	1,511,927	709,239	802,688
Illinois	16,024,552	5,522,469	10,502,083	3,675,189	6,826,894
Indiana	12,730,603	4,063,691	8,666,912	1,686,109	6,980,803
Iowa	6,760,715	2,413,956	4,346,759	743,132	3,603,627
Kansas	6,148,538	2,089,300	4,059,238	843,779	3,215,459
Kentucky	11,413,816	3,836,442	7,577,374	6,685,914	891,460
Louisiana	10,415,443	2,301,196	8,114,247	914,630	7,199,617
Maine	1,479,192	492,970	986,222	558,721	427,501
Maryland	9,563,315	2,401,567	7,161,748	5,369,252	1,792,496
Massachusetts	16,526,441	3,650,374	12,876,067	5,851,631	7,024,436
Michigan	19,558,577	6,471,752	13,086,825	1,268,363	11,818,462
Minnesota	17,525,927	3,539,090	13,986,837	3,625,945	10,360,892
Mississippi	9,471,308	3,062,512	6,408,796	2,643,748	3,765,048
Missouri	8,881,869	2,773,217	6,108,652	889,493	5,219,159
Montana	1,166,840	302,734	864,106	216,615	647,491
Nebraska	3,412,439	1,272,284	2,140,155	288,873	1,851,282
Nevada	1,867,971	445,971	1,422,000	257,290	1,164,710
New Hampshire	2,466,977	653,563	1,813,414	1,433,614	379,800
New Jersey	12,632,441	4,229,140	8,403,301	3,581,982	4,821,319
New Mexico	3,173,236	1,017,223	2,156,013	272,241	1,883,772
New York	69,509,415	11,803,278	57,706,137	29,341,296	28,364,841
North Carolina	23,790,690	5,942,583	17,848,107	11,668,244	6,179,863
North Dakota	2,754,511	933,950	1,820,561	929,300	891,261
Ohio	24,285,713	8,037,830	16,247,883	6,011,451	10,236,432
Oklahoma	10,881,181	2,943,655	7,937,526	885,216	7,052,310
Oregon	5,138,918	1,670,337	3,468,581	1,432,650	2,035,931
Pennsylvania	31,787,061	8,866,677	22,920,384	8,547,683	14,372,701
Rhode Island	2,285,492	831,303	1,454,189	940,403	513,786
South Carolina	9,894,956	3,038,626	6,856,330	4,260,949	2,595,381
South Dakota	1,943,586	714,479	1,229,107	83,186	1,145,921
Tennessee	13,590,820	4,243,552	9,347,268	4,353,683	4,993,585
Texas	41,311,080	9,033,178	32,277,902	24,638,135	7,639,767
Utah	4,933,617	962,372	3,971,245	161,098	3,810,147
Vermont	1,445,190	431,764	1,013,426	272,349	741,077
Virginia	13,899,421	3,595,470	10,303,951	5,821,341	4,482,610
Washington	9,773,673	2,514,630	7,259,043	2,554,295	4,704,748
West Virginia	5,162,657	1,778,441	3,384,216	463,027	2,921,189
Wisconsin	15,961,949	3,891,883	12,070,066	4,019,100	8,050,966
Wyoming	871,150	184,460	686,690	56,852	629,838
Dist. of Columbia	1,344,547	545,858	798,689	798,689	0
Guam	162,472	79,707	82,765	82,765	0
Puerto Rico	10,198,389	3,391,502	6,806,887	6,806,887	0
Virgin Islands	177,156	55,604	121,552	121,552	0

---

[1] Vocational Education Act of 1963, Smith-Hughes and George-Barden Acts.
[2] Includes expenditures not changeable to any specific occupational program.

Source: *Vocational and Technical Education Annual Report*, U. S. Office of Education, 1965.

COMPACT *is published bi-monthly by the Education Commission of the States, a non-profit organization formed by the Compact for Education in June 1966. Forty-one states and territories are now members of the Compact, of which the unique goal is to further a working relationship among state governors, legislators and educators for the improvement of education.*

EXECUTIVE DIRECTOR
Wendell H. Pierce

STEERING COMMITTEE

CHAIRMAN
Governor Calvin L. Rampton, Utah

VICE-CHAIRMAN
Dr. Fred H. Harrington, President, University of Wisconsin

TREASURER
Mr. John C. Driscoll, Chairman, New Hampshire State Board of Education

MEMBERS
Governor John Chafee, Rhode Island
Governor Daniel J. Evans, Washington
Governor Richard J. Hughes, New Jersey
Governor Otto Kerner, Illinois
Governor John A. Love, Colorado
Governor Robert E. McNair, South Carolina
Governor Charles L. Terry, Jr., Delaware
Senator Clarence E. Bell, Arkansas
Representative Donald L. Fortier, Louisiana
Representative Leroy F. Greene, California
Senator Richard Marvel, Nebraska
Senator Mary L. Nock, Maryland
Representative Oscar Solberg, North Dakota
Senator Richard M. Webster, Missouri
Dr. James E. Allen, Jr., Commissioner of Education, New York
Dr. Howard R. Bowen, President, University of Iowa
Dr. Denny B. Breaid, Association of Alaska School Boards
Dr. Harold H. Eibling, Superintendent of Schools, Columbus, Ohio
Mr. John E. Gray, Chairman, Coordinating Board, Texas College and University Systems
Dr. Andrew D. Holt, President, University of Tennessee
Mr. Edwin H. Honda, Chairman, Hawaii State Board of Education
Dr. Leon P. Minear, Superintendent of Public Instruction, Oregon
Hon. Angel G. Quintero-Alfaro, Secretary of Education, Puerto Rico
Mr. Harry Roberts, State Supt. of Public Instruction, Wyoming
Rev. Albert A. Schneider, Supt., Archdiocese of Santa Fe, N. M.
Mrs. Eldra L. M. Shulterbrandt, Board of Education, Virgin Islands
Dr. William James Lord Wallace, Pres., West Virginia State College

---

After five days, please return to:

Education Commission of the States
Suite 822
Lincoln Tower Bldg.
1860 Lincoln
Denver, Colorado 80203

Nonprofit Org.
U. S. POSTAGE
PAID
Denver, Colorado
Permit No. 153